

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: INVUE

Report Number: P565395

Luminaire Tested: **MSA-SA4D-760-U-T1**

Issue Date: 8/19/2021

Test Information

Test Method: LM-79-08
Report Number: P565395
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2108-334-1)
Test Lab: INNOVATIONS CENTER
Issue Date: 8/19/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4D-760-U-T1
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE I OPTICS.
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23785 lumens
Efficiency: N/A
Efficacy: 91.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type I - Medium
BUG Rating: B4 - U0 - G4

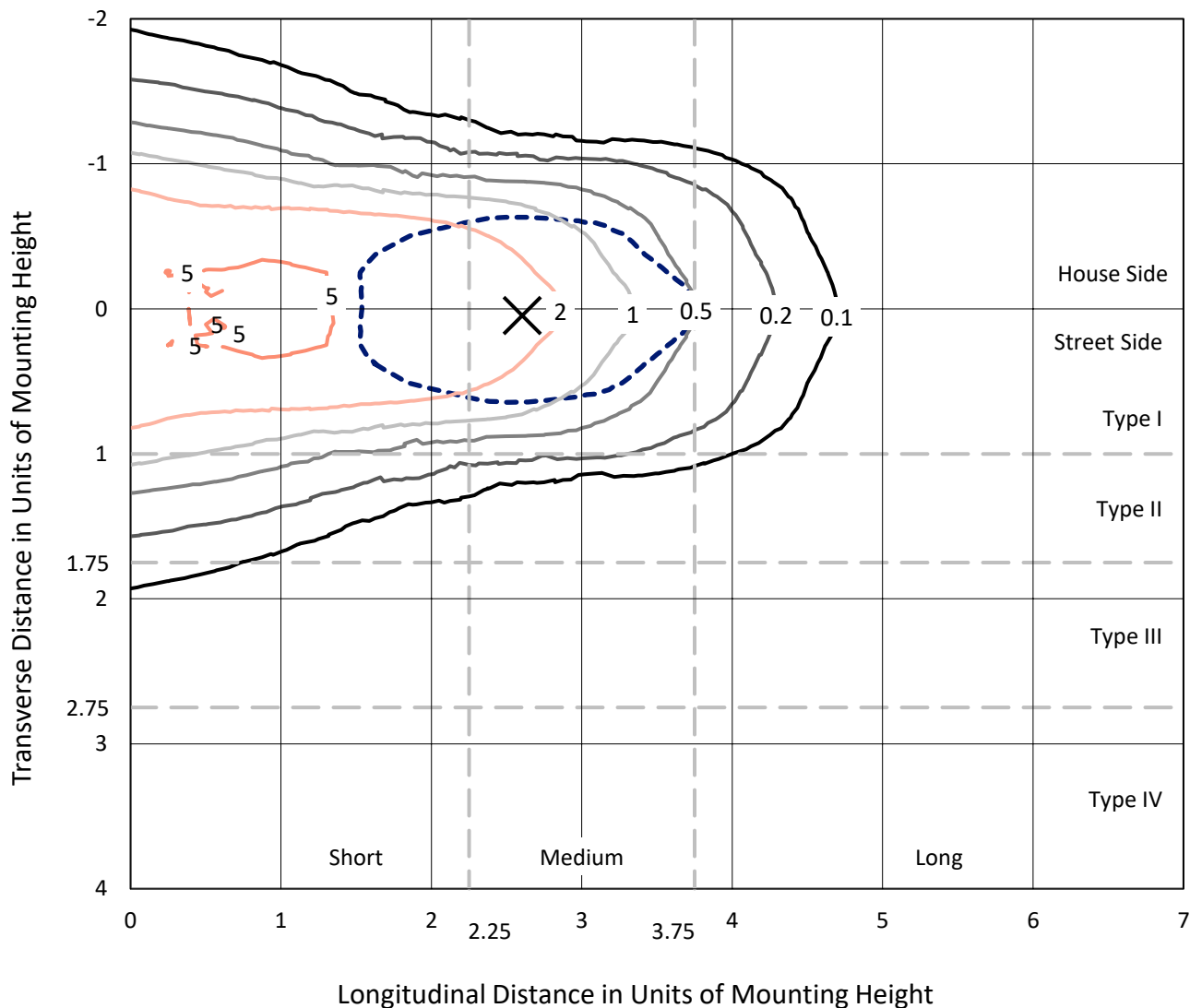
Input Watts (W): 259
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

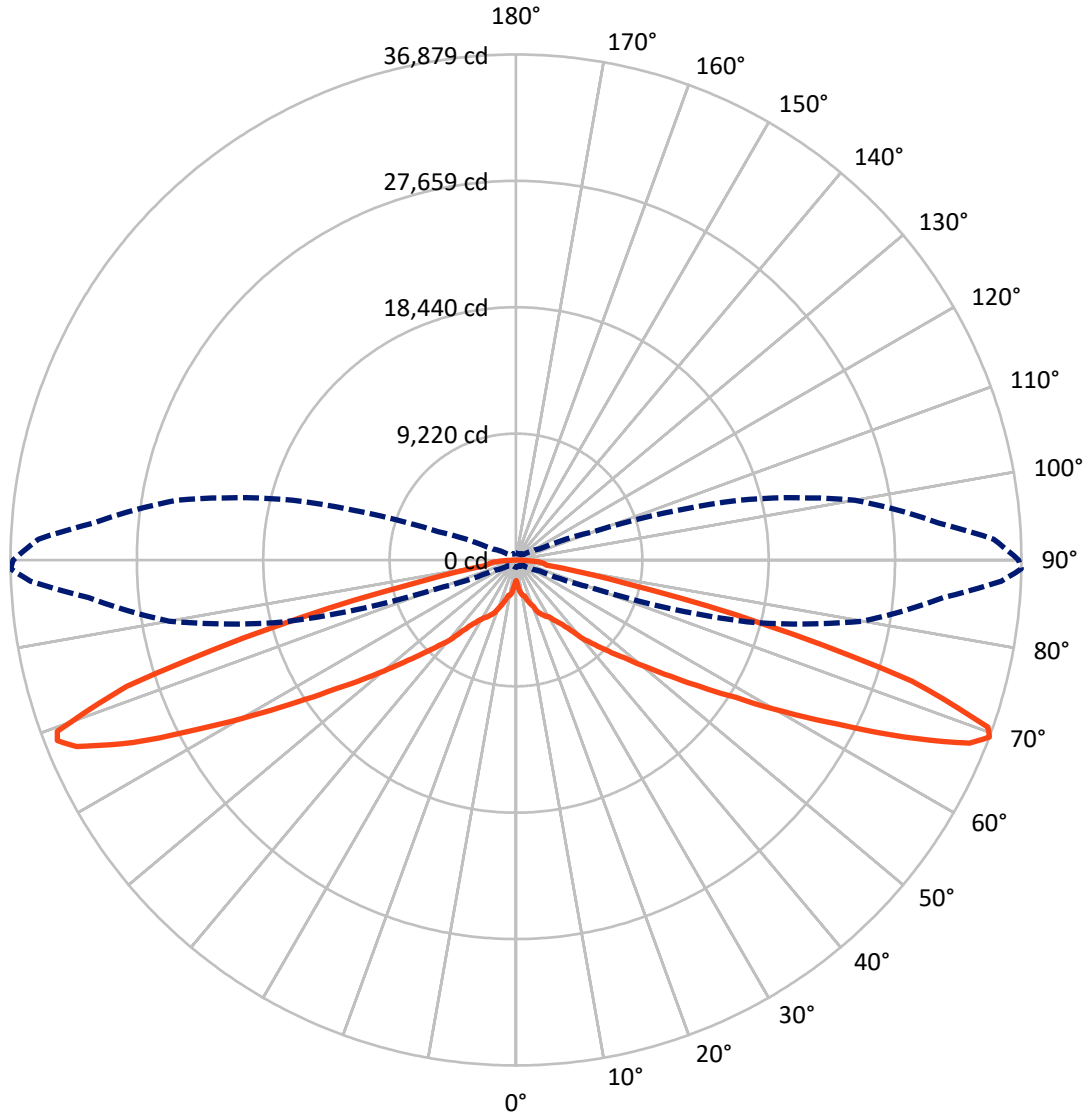
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.4 fc
 Type I - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 89-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	11892.3	0.0	11892.3
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	11892.7	0.0	11892.7
	% Fixture	50.0	0.0	50.0
Total	Lumens	23785.0	0.0	23785.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.3	0.8
10°-20°	872.1	3.7
20°-30°	1740.0	7.3
30°-40°	2631.7	11.1
40°-50°	3820.1	16.1
50°-60°	5018.9	21.1
60°-70°	6122.4	25.7
70°-80°	3095.3	13.0
80°-90°	295.0	1.2
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°	23785.0	100.0
0°-180°	23785.0	100.0

Coefficient of Utilization

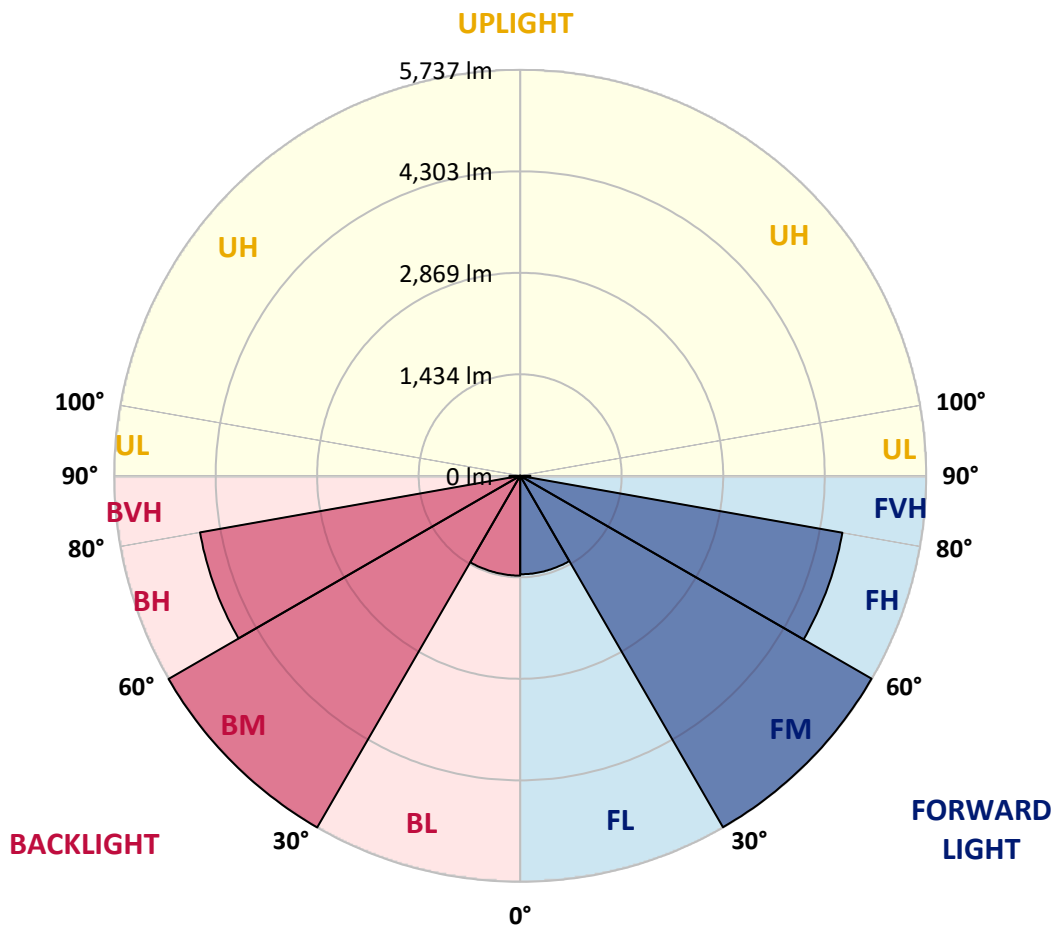


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1391.0	5.8			
FM (30°-60°)	5733.5	24.1			
FH (60°-80°)	4623.6	19.4			G2/5000
FVH (80°-90°)	144.7	0.6			G2/225
BL (0°-30°)	1410.5	5.9	B3/2500		
BM (30°-60°)	5737.3	24.1	B4/8500		
BH (60°-80°)	4594.1	19.3	B4/5000		G4/5000
BVH (80°-90°)	150.3	0.6			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G4
 Type I Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	80°
0°	1506.5	1506.5	1506.5	1506.5	1506.5	1506.5	1506.5	1506.5	1506.5	1506.5	1506.5
2.5°	1768.0	1564.1	1546.4	1497.7	1533.1	1546.4	1515.4	1471.1	1519.8	1546.4	1497.7
5°	2228.8	1927.5	1825.6	1741.4	1573.0	1502.1	1573.0	1754.7	1776.8	1887.6	1856.6
7.5°	2454.8	2406.0	2277.5	1998.4	1728.1	1577.4	1768.0	2029.4	2162.3	2268.7	2379.4
10°	2623.2	2596.6	2370.6	2171.2	2060.4	2069.3	2073.7	2157.9	2273.1	2450.3	2512.4
12.5°	2663.0	2654.2	2689.6	2645.3	2654.2	2702.9	2654.2	2632.0	2698.5	2756.1	2694.1
15°	2920.0	2915.6	2928.9	2937.8	3115.0	3190.3	3115.0	3048.5	2999.8	2951.0	3053.0
17.5°	3097.3	3075.1	3079.5	3163.7	3363.1	3571.4	3531.5	3442.9	3332.1	3398.6	3482.8
20°	3194.8	3154.9	3181.5	3216.9	3553.7	3784.1	3810.7	3691.0	3624.6	3708.8	3779.6
22.5°	3287.8	3225.8	3132.7	3168.2	3478.3	3810.7	3939.2	3908.1	3956.9	3983.5	3970.2
25°	3177.0	3216.9	3115.0	3216.9	3531.5	3837.2	4094.2	4275.9	4280.3	4267.1	4364.5
27.5°	3110.6	3079.5	2906.7	3168.2	3429.6	3620.1	4275.9	4581.7	4674.7	4391.1	4581.7
30°	2995.4	3044.1	2809.3	3026.4	3358.7	3677.7	4484.2	4922.8	4785.5	4750.0	4794.3
32.5°	2924.5	2893.4	2782.7	2902.3	3154.9	3850.5	4617.1	5122.2	5295.0	5210.9	5202.0
35°	2809.3	2831.4	2658.6	2787.1	3141.6	3704.3	4705.7	5622.9	5888.8	5822.3	5769.2
37.5°	2827.0	2751.7	2627.6	2720.6	3057.4	3784.1	4927.3	6105.9	6526.9	6562.3	6318.6
40°	2694.1	2649.7	2463.6	2618.7	2897.9	3735.3	4980.4	6655.4	7368.8	7528.3	7178.2
42.5°	2503.5	2445.9	2339.6	2512.4	2804.8	3496.1	5055.8	7315.6	8223.9	8556.3	8237.2
45°	2228.8	2153.5	2100.3	2330.7	2601.0	3434.0	4976.0	7865.0	9043.7	9500.1	9491.2
47.5°	1896.5	1847.7	1821.1	2064.8	2432.6	3278.9	4812.1	8210.7	9615.3	10785.1	10607.8
50°	1519.8	1484.4	1480.0	1737.0	2149.0	2959.9	4626.0	8383.5	10483.8	11963.7	12118.8
52.5°	1218.5	1191.9	1187.5	1395.8	1799.0	2530.1	4236.0	8516.4	11312.4	13301.9	14099.5
55°	952.7	926.1	930.5	1103.3	1431.2	2069.3	3642.3	8365.7	12039.0	14671.1	16182.0
57.5°	779.9	753.3	757.7	855.2	1094.5	1581.9	2902.3	8037.8	12366.9	16363.7	18610.2
60°	686.8	660.2	646.9	691.2	841.9	1191.9	2157.9	6761.7	12420.1	17768.3	21246.7
62.5°	638.1	611.5	598.2	611.5	695.7	912.8	1555.3	5357.1	12114.4	18969.1	23661.6
65°	593.8	571.6	553.9	567.2	611.5	726.7	1134.3	3668.9	10514.8	19518.6	25416.2
67.5°	545.0	527.3	509.6	527.3	558.3	611.5	881.8	2321.8	7882.8	18805.2	26147.4
69°	518.4	491.8	483.0	496.3	527.3	562.7	762.1	1852.2	5995.1	17449.3	25704.3
70°	491.8	474.1	460.8	483.0	509.6	536.2	686.8	1573.0	4701.3	15707.9	24605.4
72.5°	434.2	420.9	412.1	434.2	456.4	474.1	562.7	1121.0	2725.1	10696.4	19514.1
75°	381.1	367.8	363.3	381.1	398.8	407.7	474.1	771.0	1608.5	5596.4	11706.7
77.5°	319.0	301.3	305.7	327.9	341.2	345.6	398.8	553.9	948.2	2534.5	5423.5
80°	234.8	234.8	252.6	270.3	270.3	270.3	319.0	403.2	576.0	1165.4	2250.9
82.5°	163.9	168.4	172.8	199.4	203.8	186.1	243.7	292.4	358.9	509.6	779.9
85°	93.1	97.5	101.9	119.6	124.1	110.8	159.5	186.1	208.3	252.6	407.7
87.5°	35.4	39.9	53.2	62.0	66.5	48.7	75.3	88.6	88.6	106.3	181.7
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):

	85°	87.5°	89°	90°	92.5°	95°	100°	105°	110°	115°	125°
0°	1506.5	1506.5	1506.5	1506.5	1506.5	1506.5	1506.5	1506.5	1506.5	1506.5	1506.5
2.5°	1599.6	1630.6	1688.2	1701.5	1652.8	1599.6	1480.0	1555.3	1586.3	1528.7	1546.4
5°	1980.7	2047.1	2118.0	2033.8	1980.7	1945.2	1887.6	1892.0	1861.0	1759.1	1590.7
7.5°	2410.5	2335.1	2388.3	2445.9	2361.7	2366.2	2419.3	2308.6	2224.4	2051.6	1737.0
10°	2609.9	2609.9	2623.2	2623.2	2587.7	2587.7	2583.3	2406.0	2304.1	2228.8	2140.2
12.5°	2623.2	2618.7	2671.9	2632.0	2640.9	2649.7	2671.9	2751.7	2725.1	2627.6	2707.3
15°	2990.9	2973.2	2990.9	2986.5	2999.8	3039.7	3021.9	3004.2	3008.7	3079.5	3199.2
17.5°	3336.5	3345.4	3327.7	3358.7	3358.7	3385.3	3447.3	3385.3	3332.1	3465.0	3558.1
20°	3735.3	3704.3	3633.4	3686.6	3699.9	3704.3	3806.2	3730.9	3655.6	3704.3	3815.1
22.5°	4138.6	4134.1	4143.0	4147.4	4165.1	4098.7	3961.3	3939.2	3987.9	3921.4	3934.7
25°	4386.7	4391.1	4413.3	4417.7	4342.4	4413.3	4462.0	4315.8	4315.8	4302.5	4213.9
27.5°	4688.0	4621.5	4648.1	4683.6	4652.6	4670.3	4612.7	4400.0	4626.0	4657.0	4302.5
30°	4891.8	4860.8	4829.8	4865.2	4896.3	4976.0	4812.1	4789.9	4807.6	4971.6	4506.3
32.5°	5321.6	5365.9	5308.3	5250.7	5308.3	5290.6	5219.7	5188.7	5410.3	5193.1	4648.1
35°	5720.4	5738.2	5742.6	5733.7	5769.2	5707.1	5707.1	5822.3	5888.8	5654.0	4692.4
37.5°	6682.0	6619.9	6491.4	6429.4	6540.2	6633.2	6358.5	6495.9	6469.3	6070.5	5024.8
40°	7373.2	7515.0	7554.9	7537.1	7554.9	7289.0	7346.6	7448.5	7328.9	6668.7	4909.6
42.5°	8383.5	8472.1	8441.1	8401.2	8418.9	8370.2	8197.4	8574.0	8144.2	7337.7	5086.8
45°	9305.1	9504.5	9517.8	9380.4	9491.2	9318.4	9389.3	9522.2	9088.0	7838.4	5038.1
47.5°	10404.0	10816.1	10661.0	10661.0	10771.8	10399.6	10567.9	10745.2	9593.1	8175.2	4772.2
50°	12030.2	12251.7	12242.9	12203.0	12251.7	12052.3	12025.7	12003.6	10368.5	8494.2	4608.2
52.5°	13869.0	14170.4	14055.1	14099.5	14165.9	13789.3	14086.2	13275.3	11338.9	8613.9	4236.0
55°	16217.5	16425.7	16310.5	16084.5	16385.9	16146.6	16244.1	14662.2	12012.5	8272.7	3615.7
57.5°	19013.4	19119.8	18929.2	18907.1	19106.5	18849.5	18685.5	16221.9	12362.5	8015.7	2889.0
60°	22279.1	22611.4	22491.8	22301.2	22482.9	22256.9	21016.3	17546.8	12291.6	6814.9	2237.7
62.5°	26196.1	26532.9	26399.9	26271.4	26386.6	25797.3	23205.2	18592.5	11972.6	5401.4	1635.0
65°	29430.7	30950.6	31150.0	31154.4	30596.1	29231.3	24951.0	19000.1	10288.8	3770.8	1196.4
67.5°	31557.6	34716.9	35700.6	35346.1	34065.6	30950.6	25655.5	18202.6	7944.8	2383.9	895.1
69°	31313.9	35456.9	36879.2	36679.9	34880.9	30924.0	25106.1	16860.0	6070.5	1896.5	757.7
70°	30188.4	34849.8	36538.1	36626.7	34362.4	29736.5	24126.8	15318.0	4909.6	1617.3	695.7
72.5°	24091.4	28717.3	30201.7	30782.2	28535.7	23812.2	19784.4	10807.2	2844.7	1129.9	562.7
75°	14923.6	17413.8	18645.7	18982.4	17622.1	14830.6	12008.0	6012.9	1732.5	797.6	474.1
77.5°	6690.8	7413.1	8122.0	8122.0	7590.3	6770.6	5503.3	2906.7	983.7	567.2	398.8
80°	2242.1	2326.3	2264.2	2286.4	2197.8	2113.6	2211.1	1254.0	607.0	425.4	323.5
82.5°	1524.3	1914.2	2033.8	2033.8	1909.8	1506.5	850.8	576.0	372.2	305.7	248.1
85°	1240.7	1515.4	1626.2	1674.9	1577.4	1271.7	447.5	279.2	221.6	195.0	168.4
87.5°	416.5	389.9	367.8	358.9	376.6	394.4	221.6	119.6	101.9	93.1	88.6
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):

	135°	145°	155°	165°	175°	180°
0°	1506.5	1506.5	1506.5	1506.5	1506.5	1506.5
2.5°	1577.4	1524.3	1546.4	1568.6	1728.1	1847.7
5°	1568.6	1643.9	1812.3	2025.0	2122.5	2361.7
7.5°	1612.9	1887.6	2202.2	2423.8	2512.4	2587.7
10°	2157.9	2206.6	2313.0	2525.7	2702.9	2733.9
12.5°	2787.1	2773.8	2698.5	2796.0	2707.3	2769.4
15°	3278.9	3132.7	3030.8	3017.5	2986.5	2986.5
17.5°	3549.2	3420.7	3278.9	3243.5	3150.4	3225.8
20°	3868.3	3646.7	3292.2	3256.8	3225.8	3154.9
22.5°	3806.2	3584.7	3216.9	3172.6	3336.5	3327.7
25°	3881.6	3584.7	3234.6	3185.9	3261.2	3261.2
27.5°	3695.5	3451.8	3199.2	2906.7	3137.2	3190.3
30°	3646.7	3372.0	3079.5	2818.1	3053.0	3004.2
32.5°	3903.7	3172.6	2884.6	2804.8	2977.6	2942.2
35°	3704.3	3137.2	2835.8	2689.6	2893.4	2858.0
37.5°	3788.5	3092.8	2751.7	2627.6	2791.5	2844.7
40°	3770.8	2884.6	2654.2	2494.7	2658.6	2685.2
42.5°	3473.9	2725.1	2490.2	2330.7	2414.9	2503.5
45°	3385.3	2627.6	2330.7	2109.2	2113.6	2215.5
47.5°	3221.3	2406.0	2038.3	1834.4	1834.4	1918.6
50°	2946.6	2109.2	1705.9	1519.8	1515.4	1581.9
52.5°	2539.0	1821.1	1440.1	1236.3	1223.0	1289.4
55°	2078.1	1466.7	1134.3	1001.4	974.8	1001.4
57.5°	1617.3	1143.2	895.1	788.7	784.3	806.4
60°	1254.0	895.1	713.4	651.4	660.2	695.7
62.5°	948.2	713.4	607.0	584.9	598.2	633.6
65°	753.3	615.9	553.9	540.6	553.9	589.3
67.5°	611.5	558.3	514.0	496.3	505.1	540.6
69°	562.7	527.3	491.8	469.7	478.5	505.1
70°	536.2	509.6	474.1	452.0	460.8	487.4
72.5°	469.7	456.4	429.8	407.7	412.1	434.2
75°	412.1	403.2	385.5	358.9	358.9	385.5
77.5°	345.6	350.0	332.3	305.7	301.3	314.6
80°	274.7	283.6	274.7	248.1	239.3	239.3
82.5°	199.4	217.1	208.3	181.7	177.2	177.2
85°	124.1	137.4	132.9	115.2	115.2	101.9
87.5°	57.6	75.3	70.9	62.0	57.6	39.9
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)