

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: P597164

Luminaire Tested: **MSA-SA4D-835-U-SL3**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597164
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-18)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4D-835-U-SL3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21281 lumens
Efficiency: N/A
Efficacy: 82.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G4

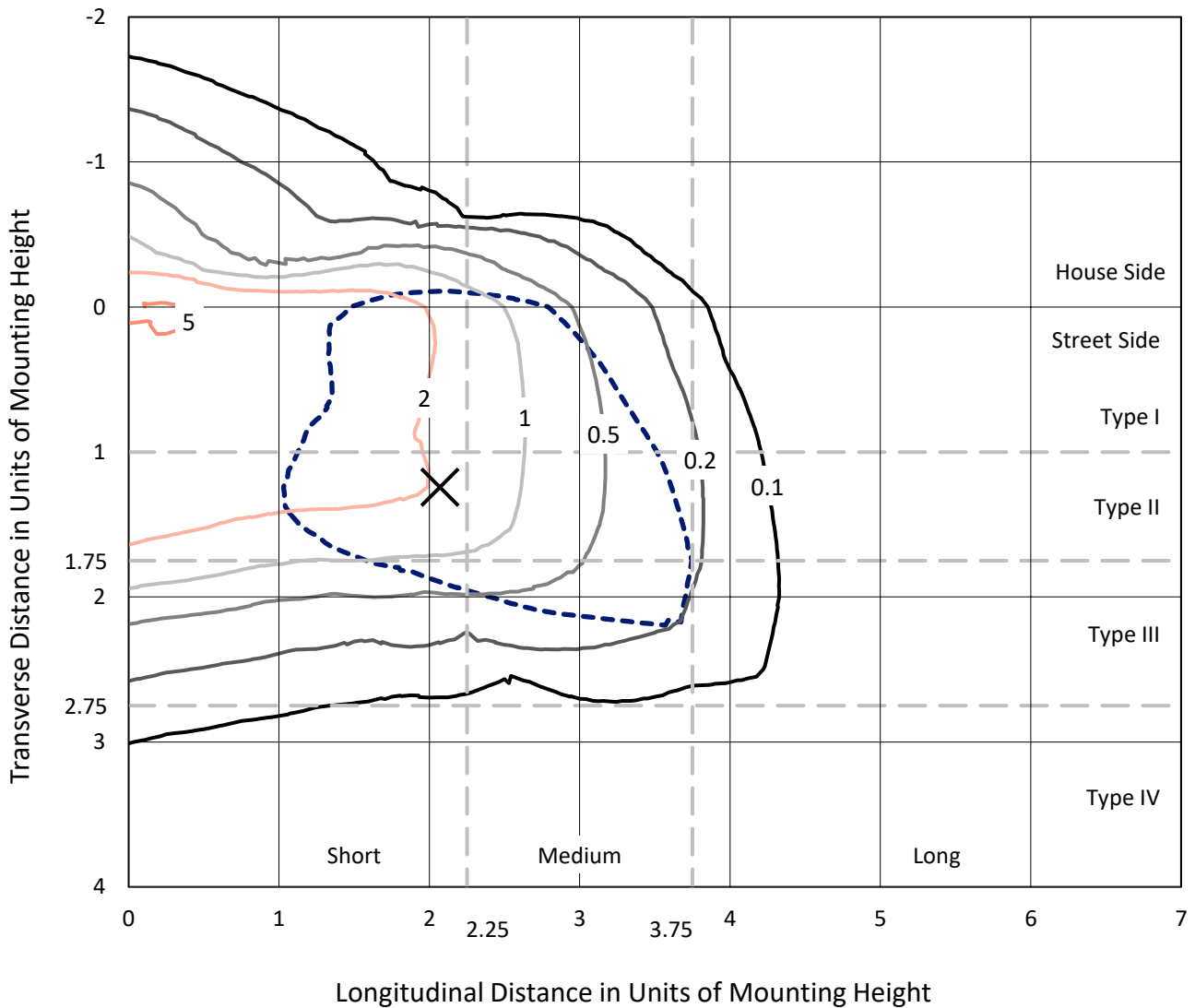
Input Watts (W): 259
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

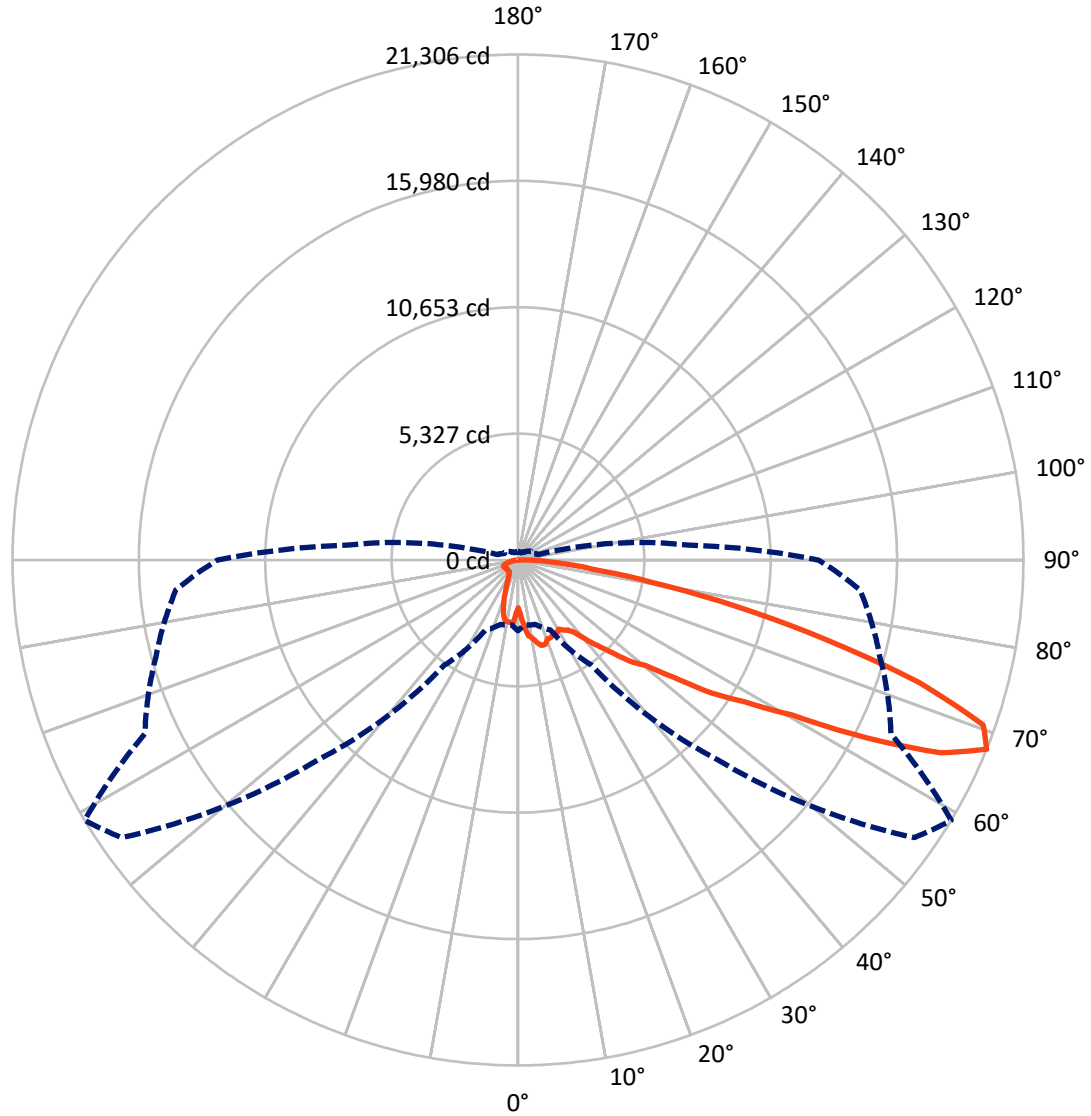
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.5 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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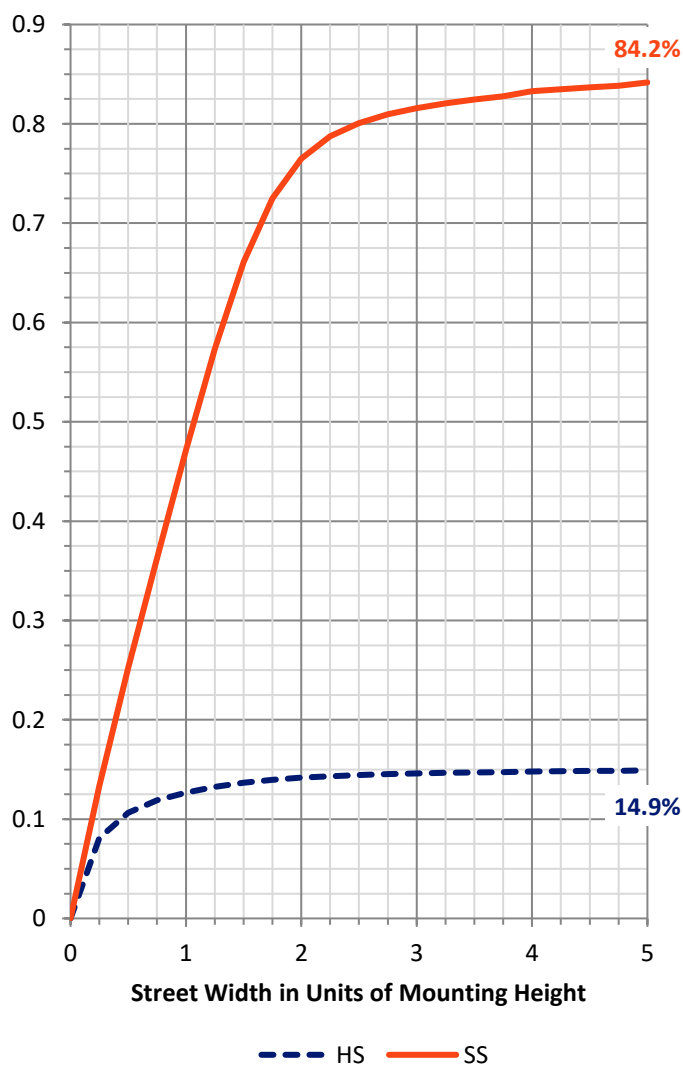
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3203.2	0.0	3203.2
	% Fixture	15.1	0.0	15.1
Street Side	Lumens	18077.8	0.0	18077.8
	% Fixture	84.9	0.0	84.9
Total	Lumens	21281.0	0.0	21281.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	263.0	1.2
10°-20°	778.3	3.7
20°-30°	1111.5	5.2
30°-40°	1637.8	7.7
40°-50°	2767.1	13.0
50°-60°	4815.3	22.6
60°-70°	6136.2	28.8
70°-80°	3249.2	15.3
80°-90°	522.7	2.5
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°	21281.0	100.0
0°-180°	21281.0	100.0

Coefficient of Utilization



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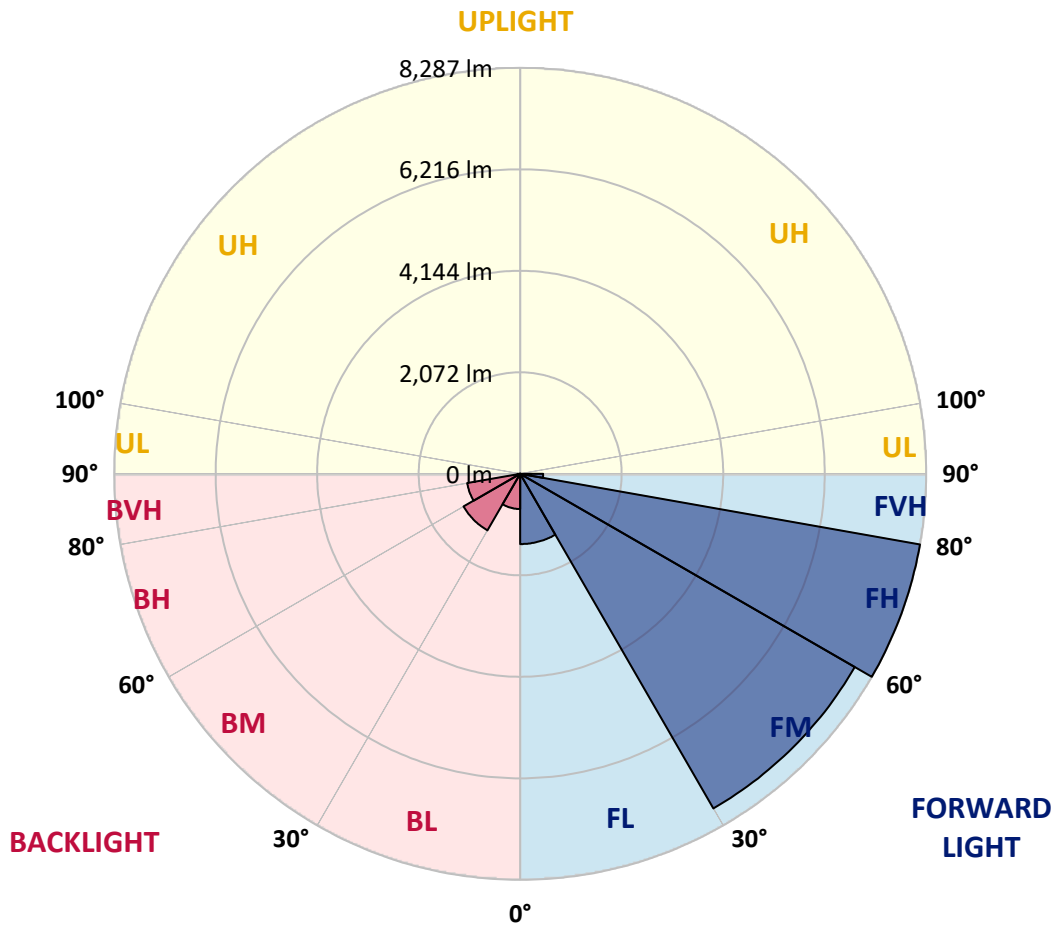
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1434.4	6.7			
FM (30°-60°)	7886.4	37.1			
FH (60°-80°)	8287.5	38.9			G4/12000
FVH (80°-90°)	469.5	2.2			G3/500
BL (0°-30°)	718.3	3.4	B2/1000		
BM (30°-60°)	1333.8	6.3	B2/2500		
BH (60°-80°)	1097.9	5.2	B3/2500		G3/2500
BVH (80°-90°)	53.2	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	2013.7	2013.7	2013.7	2013.7	2013.7	2013.7	2013.7	2013.7	2013.7	2013.7	2013.7
2.5°	2514.2	2397.0	2272.6	2307.7	2379.0	2411.4	2376.3	2342.0	2297.8	2245.5	2424.1
5°	3049.0	2875.0	2849.7	2848.8	2823.6	2722.6	2852.4	2843.4	2895.7	2949.8	3088.7
7.5°	3201.4	3136.5	3066.2	3099.5	2972.4	2967.0	3169.0	3226.7	3327.7	3294.3	3481.0
10°	3123.0	3049.9	3086.9	3073.4	3085.1	3218.6	3342.1	3345.7	3453.9	3560.3	3440.4
12.5°	2985.0	2990.4	3137.4	3132.0	3321.4	3569.4	3606.3	3577.5	3754.2	3682.1	3784.9
15°	3083.3	3149.1	3112.1	3143.7	3218.6	3534.2	3637.0	3741.6	3909.3	3974.3	3871.5
17.5°	3240.2	3275.4	3109.4	3092.3	3246.5	3396.2	3651.4	3740.7	3766.9	4229.5	4084.3
20°	3173.5	3244.7	3082.4	2874.1	3130.2	3328.6	3580.2	3553.1	3680.3	4249.3	4128.5
22.5°	3362.9	3244.7	3038.2	2890.3	2980.5	3162.7	3376.4	3554.0	3704.6	4133.0	4192.5
25°	3398.9	3343.0	3150.0	3003.0	2972.4	3037.3	3342.1	3458.4	3712.8	4291.7	4158.2
27.5°	3619.0	3535.1	3141.9	3146.4	2994.0	2879.5	3233.9	3478.3	3804.7	4193.4	4242.1
30°	3892.2	3828.2	3334.9	3352.9	3141.9	2930.9	3307.8	3381.8	3857.9	4346.7	4347.6
32.5°	4096.9	4209.7	3714.6	3469.3	3394.4	3236.6	3194.2	3527.0	3795.7	4624.5	4528.0
35°	4465.8	4553.2	4006.7	3810.2	3556.7	3379.1	3502.6	3622.6	4054.5	4989.7	4795.8
37.5°	5148.4	5047.4	4549.6	4240.3	4145.6	3889.5	3958.0	3874.2	4335.9	5400.0	5320.7
40°	5543.4	5456.0	4932.0	4760.7	4385.5	4418.0	4332.3	4393.6	4712.0	5836.5	5811.3
42.5°	5933.0	5815.8	5373.0	5253.9	4879.7	4721.0	4736.3	4934.7	5291.8	6541.7	6457.9
45°	6318.1	6017.8	5823.9	5855.5	5675.1	5349.5	5372.1	5558.8	5924.9	7348.0	7155.0
47.5°	6613.0	6365.0	6213.5	6174.7	6085.4	6521.0	6326.2	6402.0	6563.4	8065.8	7992.7
50°	7171.2	6881.7	6684.2	6628.3	6931.3	7537.3	7140.5	6977.3	7320.9	8993.8	8955.9
52.5°	8064.9	7704.2	7375.0	7371.4	7809.7	8202.9	8482.4	8201.1	8327.3	9944.3	10052.5
55°	8845.0	8427.4	8131.6	8294.9	8918.9	9159.7	10109.3	9889.3	9782.8	10903.8	11213.1
57.5°	9136.2	8648.4	8455.4	8696.2	9616.0	10853.3	11857.0	11278.0	11174.3	11989.6	12638.0
60°	8496.9	7981.0	7992.7	8446.4	10039.9	12096.9	13767.9	13276.5	12668.6	13341.4	13974.5
62.5°	6675.2	6209.0	6512.9	7202.8	9684.5	13305.3	16329.1	16536.5	14375.8	14462.3	14715.7
65°	4537.0	4214.2	4488.3	5163.8	7854.8	13964.5	18768.5	19600.0	15930.5	15196.4	15035.9
67.5°	2985.9	2757.7	2810.9	3260.0	5407.3	11904.8	20399.9	21306.2	17351.7	15798.8	14471.4
70°	2312.2	2128.3	2104.8	2340.2	3206.8	8270.5	19433.1	20811.1	18217.5	15234.3	12613.6
72.5°	1814.4	1674.7	1687.3	1913.6	2483.6	4588.4	15037.7	17697.1	16913.5	13138.5	9690.9
75°	1414.9	1300.4	1364.4	1623.3	2296.9	2851.5	10375.3	13431.6	13076.3	9728.7	5527.2
77.5°	1027.2	953.2	1044.3	1382.5	2158.9	2446.6	6458.8	9370.7	8376.9	4995.1	1896.5
80°	673.7	632.2	707.0	1127.3	1957.8	2354.6	3991.4	5741.8	4139.3	1403.2	717.8
82.5°	396.8	378.8	441.0	762.9	1573.7	2206.7	2662.1	3190.6	1693.6	593.4	381.5
85°	208.3	194.8	261.5	438.3	1084.9	2014.6	2095.8	1910.0	817.9	257.9	182.2
87.5°	69.4	67.6	110.9	169.5	410.3	1069.5	1118.2	907.2	337.3	74.9	39.7
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2013.7	2013.7	2013.7	2013.7	2013.7	2013.7	2013.7	2013.7	2013.7	2013.7	2013.7
2.5°	2448.4	2412.3	2204.9	2233.8	2260.8	2247.3	2239.2	2145.4	2136.4	2269.9	2259.0
5°	3085.1	2935.4	2758.6	2750.5	2634.2	2515.2	2538.6	2500.7	2511.5	2566.6	2572.0
7.5°	3421.5	3234.8	3066.2	2792.0	2559.3	2370.9	2400.6	2391.6	2367.3	2491.7	2525.1
10°	3415.2	3249.2	3058.9	2727.1	2570.2	2416.9	2232.9	2058.8	2007.4	1946.1	1951.5
12.5°	3640.6	3493.6	3078.8	2740.6	2527.8	2263.5	1919.1	1728.8	1546.6	1543.0	1497.0
15°	3711.0	3602.7	3121.2	2663.0	2231.1	1852.3	1496.1	1289.6	1157.9	1131.8	1093.0
17.5°	3888.6	3719.1	2992.2	2412.3	1886.6	1448.3	1124.6	980.3	969.4	987.5	967.6
20°	3900.3	3625.3	2759.5	2041.7	1515.9	1097.5	917.1	845.0	883.8	928.0	926.2
22.5°	3890.4	3507.1	2558.4	1726.1	1139.0	882.0	803.5	787.3	823.4	889.2	897.3
25°	3789.4	3468.4	2306.8	1417.6	924.4	755.7	734.1	744.0	789.1	866.6	866.6
27.5°	3894.9	3310.5	1991.2	1153.4	777.4	672.8	688.1	713.3	746.7	835.1	851.3
30°	3860.7	3362.9	1736.9	928.9	685.4	615.0	649.3	674.6	712.4	804.4	812.5
32.5°	3952.6	3223.1	1523.2	781.0	625.0	592.5	600.6	634.9	684.5	756.6	771.0
35°	4093.3	3274.5	1277.9	702.5	595.2	566.3	581.7	608.7	658.3	728.7	740.4
37.5°	4542.4	3271.8	1108.3	659.2	589.8	560.9	568.1	587.1	644.8	708.8	735.9
40°	4831.0	3459.3	954.1	649.3	583.5	558.2	551.9	572.6	618.6	694.4	713.3
42.5°	5373.0	3573.9	887.4	645.7	582.6	542.9	536.6	560.9	606.0	676.4	705.2
45°	5945.6	3737.1	834.2	643.9	579.9	540.2	521.2	551.9	589.8	657.4	690.8
47.5°	6619.3	4082.5	804.4	637.6	574.5	543.8	515.8	531.2	573.6	641.2	674.6
50°	7501.3	4539.7	810.7	628.6	582.6	544.7	507.7	514.9	553.7	619.5	653.8
52.5°	8573.5	5247.6	851.3	632.2	588.0	540.2	504.1	500.5	533.9	591.6	625.9
55°	9865.8	6252.3	973.1	649.3	588.0	539.3	498.7	482.5	507.7	554.6	588.0
57.5°	11425.0	7415.6	1211.1	657.4	583.5	533.9	487.0	458.1	473.5	512.2	543.8
60°	12764.2	8354.4	1456.4	662.8	592.5	521.2	463.5	427.5	437.4	467.1	495.1
62.5°	13446.9	8617.7	1530.4	658.3	616.8	513.1	435.6	395.0	395.9	421.1	446.4
65°	13575.0	8266.9	1233.7	653.8	648.4	512.2	415.7	367.0	360.7	378.8	400.4
67.5°	12662.3	7175.7	890.1	643.9	652.0	506.8	402.2	344.5	328.3	340.9	358.9
70°	10751.4	5778.8	747.6	624.1	608.7	479.8	378.8	321.0	299.4	308.4	321.9
72.5°	8015.3	4275.5	652.0	581.7	530.3	410.3	342.7	294.9	272.3	278.7	288.6
75°	4453.1	2280.7	545.6	505.9	432.9	331.9	292.2	261.5	241.7	244.4	255.2
77.5°	1479.0	841.4	400.4	401.3	327.4	256.1	240.8	223.6	208.3	209.2	218.2
80°	670.0	465.3	286.8	288.6	228.2	185.8	184.9	179.5	169.5	166.8	173.1
82.5°	388.7	282.3	196.6	187.6	147.0	120.8	134.4	131.7	129.0	119.0	120.8
85°	191.2	151.5	102.8	97.4	81.2	60.4	72.1	74.9	72.1	61.3	60.4
87.5°	46.9	49.6	25.3	23.4	13.5	6.3	10.8	10.8	13.5	9.0	4.5
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)