

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: P597163

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

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597163
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-19)
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-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17810 lumens
Efficiency: N/A
Efficacy: 68.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G3

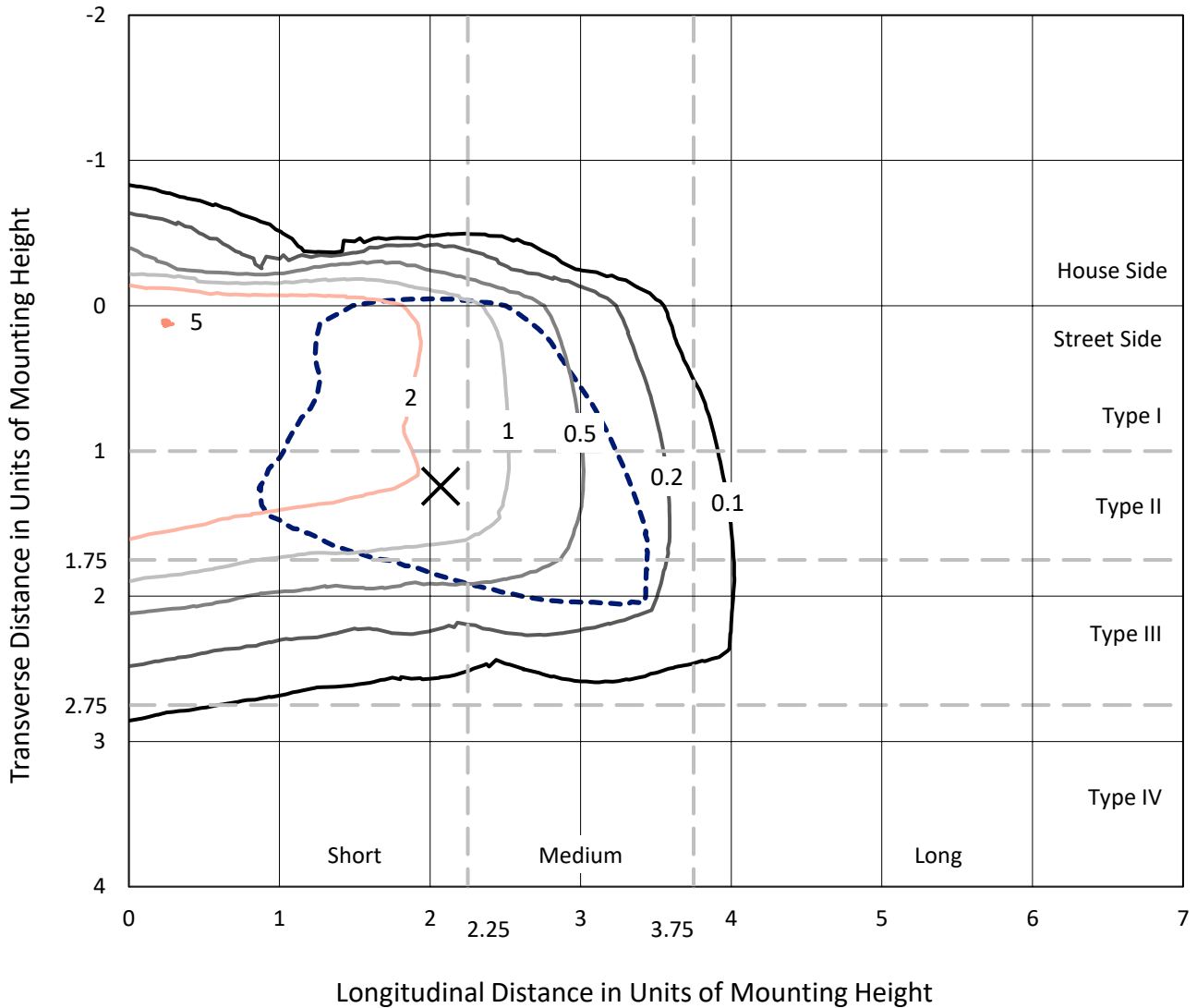
Input Watts (W): 259
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

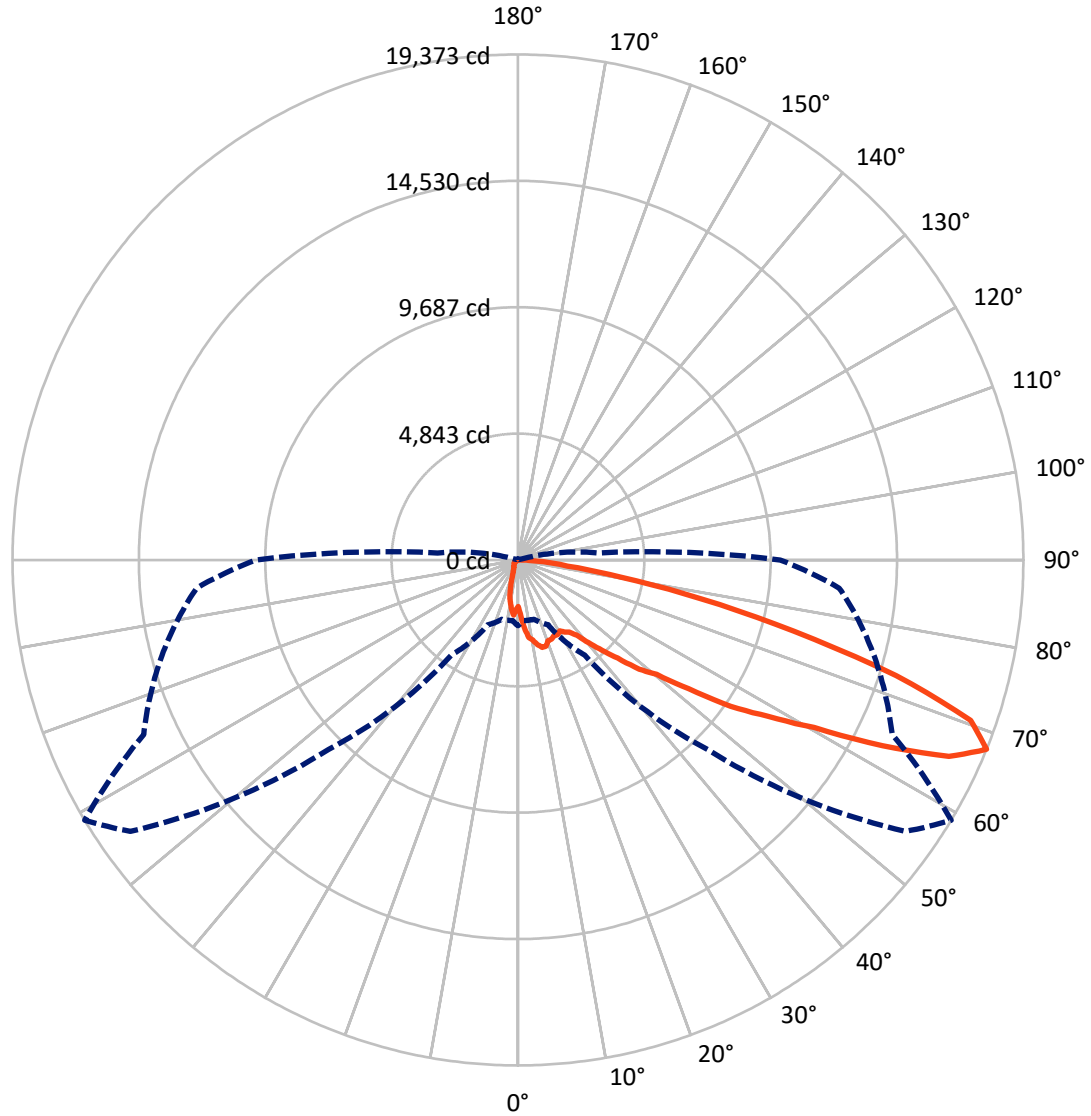
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.1 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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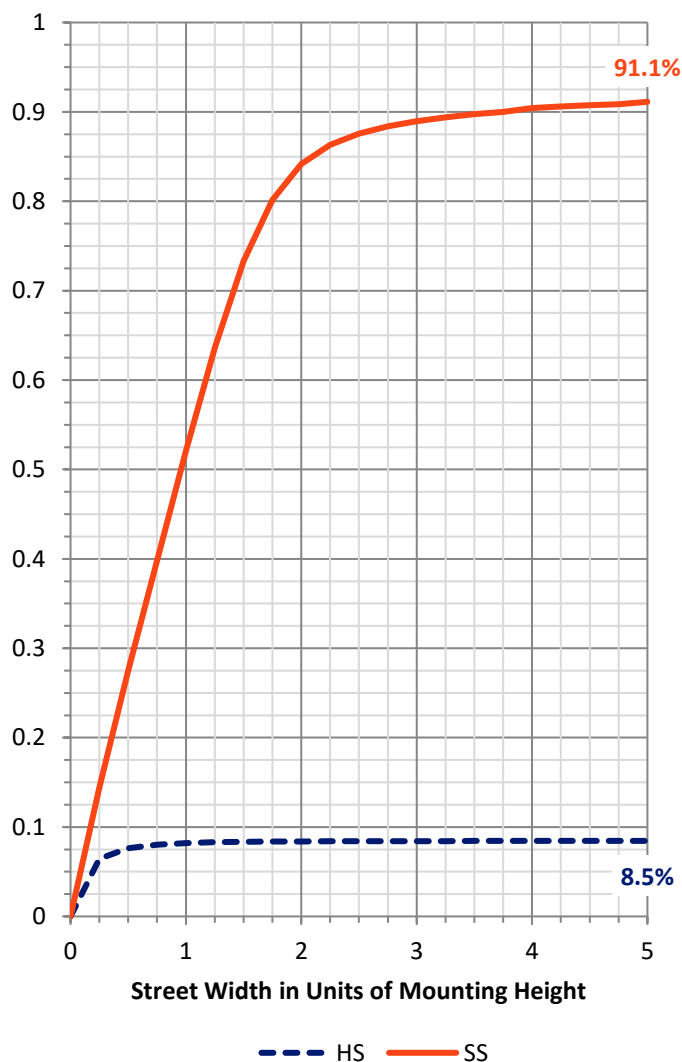
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1514.6	0.0	1514.6
	% Fixture	8.5	0.0	8.5
Street Side	Lumens	16295.4	0.0	16295.4
	% Fixture	91.5	0.0	91.5
Total	Lumens	17810.0	0.0	17810.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	216.7	1.2
10°-20°	610.1	3.4
20°-30°	907.4	5.1
30°-40°	1400.0	7.9
40°-50°	2498.5	14.0
50°-60°	4446.2	25.0
60°-70°	5178.2	29.1
70°-80°	2302.8	12.9
80°-90°	250.1	1.4
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°	17810.0	100.0
0°-180°	17810.0	100.0

Coefficient of Utilization

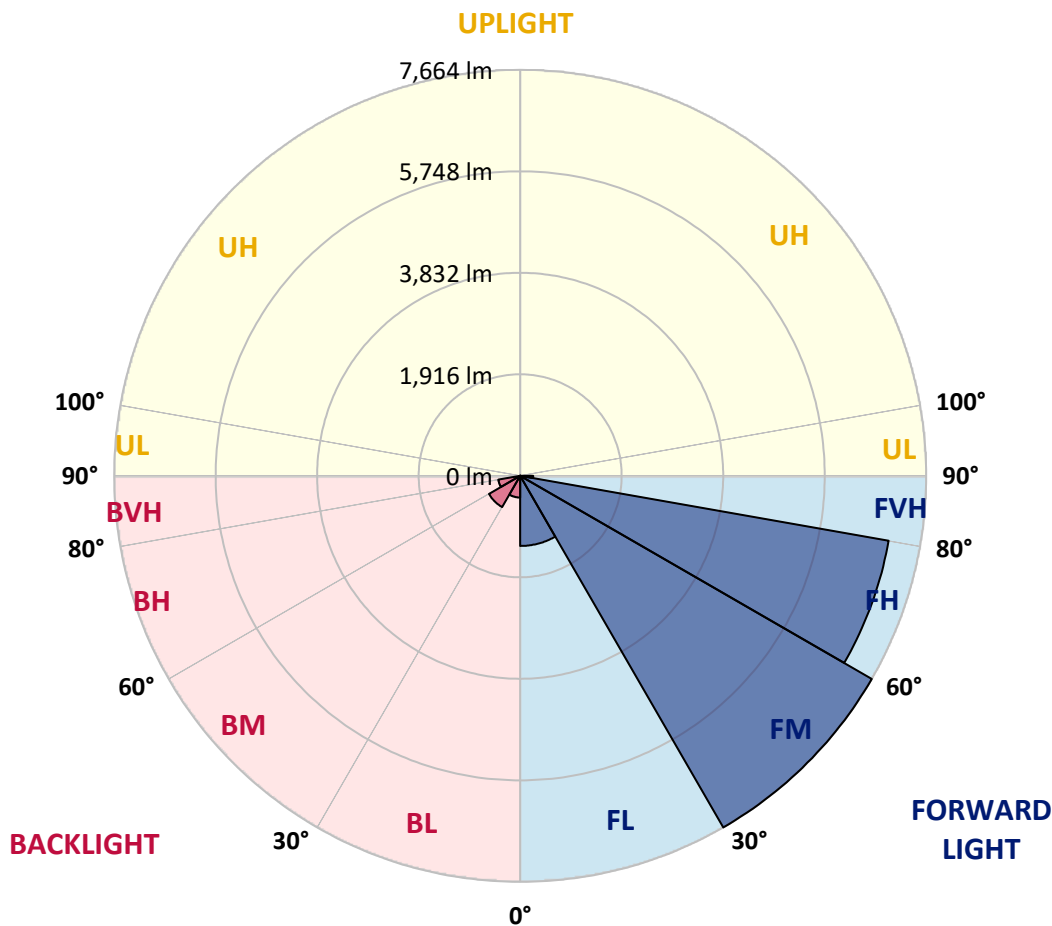


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1324.6	7.4			
FM (30°-60°)	7663.7	43.0			
FH (60°-80°)	7061.5	39.6			G3/7500
FVH (80°-90°)	245.6	1.4			G3/500
BL (0°-30°)	409.6	2.3	B1/500		
BM (30°-60°)	681.0	3.8	B1/1000		
BH (60°-80°)	419.5	2.4	B1/500		G1/500
BVH (80°-90°)	4.4	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-G3
 Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	1781.9	1781.9	1781.9	1781.9	1781.9	1781.9	1781.9	1781.9	1781.9	1781.9	1781.9
2.5°	2323.0	2235.6	2111.1	2148.1	2181.4	2213.0	2160.7	2130.9	2116.5	1988.5	2149.0
5°	2852.4	2743.3	2686.4	2672.0	2635.9	2555.7	2689.2	2629.6	2649.5	2674.7	2727.0
7.5°	3013.8	2964.2	2882.1	2912.8	2775.7	2764.0	2948.9	3000.3	3067.9	3021.9	3085.0
10°	2930.8	2845.2	2883.9	2873.1	2867.7	2988.5	3118.4	3121.1	3222.1	3270.8	3057.1
12.5°	2766.7	2776.6	2915.5	2904.7	3085.0	3326.7	3356.5	3324.9	3489.9	3405.2	3372.7
15°	2875.8	2957.0	2880.3	2906.5	2970.5	3272.6	3378.1	3475.5	3631.5	3682.0	3462.9
17.5°	3007.5	3015.6	2875.8	2843.4	3004.8	3145.5	3394.4	3474.6	3489.9	3932.7	3665.8
20°	2936.2	3005.7	2838.9	2634.1	2884.8	3076.0	3328.5	3303.3	3406.1	4006.7	3711.8
22.5°	3125.6	3026.4	2812.7	2658.5	2743.3	2917.3	3131.0	3296.1	3450.3	3829.9	3771.3
25°	3143.7	3107.6	2917.3	2780.2	2765.8	2810.0	3107.6	3214.0	3455.7	3988.6	3720.8
27.5°	3346.6	3305.1	2915.5	2929.0	2793.8	2657.6	2994.0	3243.8	3554.0	3892.1	3828.1
30°	3608.1	3611.7	3109.4	3151.8	2958.8	2739.7	3086.8	3155.4	3620.7	4046.4	3907.5
32.5°	3873.2	3982.3	3492.7	3268.1	3207.7	3050.8	2971.4	3287.9	3547.7	4309.7	4105.9
35°	4276.3	4350.3	3808.3	3607.2	3370.0	3191.5	3285.2	3398.9	3810.1	4658.7	4366.5
37.5°	4959.0	4825.5	4374.6	4024.7	3967.9	3704.6	3751.5	3649.6	4077.9	5069.9	4882.3
40°	5343.1	5222.3	4753.4	4582.9	4220.4	4261.0	4113.1	4172.6	4466.6	5498.2	5352.2
42.5°	5743.5	5628.1	5216.9	5096.0	4750.7	4582.9	4516.2	4729.9	5062.7	6211.6	6025.8
45°	6145.7	5852.7	5678.6	5739.0	5583.9	5252.1	5174.5	5364.8	5713.8	7088.1	6736.4
47.5°	6484.8	6237.7	6107.0	6079.0	6018.6	6479.4	6163.8	6247.6	6401.8	7863.7	7622.0
50°	7096.2	6852.7	6648.0	6591.2	6885.2	7539.0	7052.0	6889.7	7198.1	8800.6	8648.2
52.5°	7979.1	7668.9	7343.3	7344.2	7898.8	8257.7	8488.6	8203.6	8261.3	9831.4	9763.7
55°	8688.8	8294.7	8025.1	8237.9	9064.8	9265.9	10147.0	9897.2	9822.4	10787.3	10704.3
57.5°	8786.2	8313.7	8185.6	8558.9	9690.7	10974.8	11922.6	11298.6	11184.1	11587.2	11752.2
60°	7877.2	7375.8	7472.3	8072.9	9894.5	12016.4	13553.1	13043.6	12315.8	12524.1	12637.8
62.5°	5875.2	5474.8	5745.3	6540.7	9109.0	12714.4	15440.5	15676.8	13628.8	13227.5	13203.2
65°	3811.9	3561.2	3738.8	4390.8	6893.3	12635.1	17126.9	18151.3	14663.2	13801.1	13380.8
67.5°	2521.4	2331.1	2356.4	2742.4	4457.6	10276.0	18135.1	19373.3	15826.5	14126.6	12362.7
70°	1879.3	1729.6	1738.7	1947.9	2645.9	6777.0	16729.2	18409.2	16251.3	12998.5	9978.4
72.5°	1355.4	1255.3	1339.2	1571.8	2108.4	3583.7	12469.1	15161.0	14170.8	10252.5	6722.9
75°	938.8	872.9	1010.0	1314.8	1924.4	2224.7	8239.7	10913.5	9932.4	6432.5	3039.1
77.5°	520.3	500.5	698.0	1071.3	1746.8	1823.4	5047.3	7171.1	5509.1	2305.9	723.2
80°	227.3	220.0	338.2	804.4	1468.1	1647.6	2841.6	3976.0	2167.0	411.2	233.6
82.5°	97.4	93.8	144.3	484.3	1066.8	1377.9	1752.2	1913.6	745.8	127.2	132.6
85°	17.1	18.9	57.7	255.2	649.3	699.8	1268.8	1132.7	375.1	60.4	94.7
87.5°	0.0	0.0	9.0	49.6	121.7	200.2	550.1	396.8	71.2	19.8	16.2
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°	1781.9	1781.9	1781.9	1781.9	1781.9	1781.9	1781.9	1781.9	1781.9	1781.9	1781.9
2.5°	2171.5	2121.0	1928.9	1904.6	1878.4	1839.7	1825.2	1742.3	1731.4	1837.9	1837.9
5°	2702.7	2522.3	2339.3	2195.0	2066.0	1887.5	1837.0	1784.7	1742.3	1731.4	1764.8
7.5°	2983.1	2763.1	2475.4	2108.4	1810.8	1552.0	1443.8	1368.0	1283.3	1308.5	1322.0
10°	2967.8	2734.2	2367.2	1895.6	1565.5	1279.6	1004.6	844.1	754.8	710.6	705.2
12.5°	3118.4	2898.4	2294.2	1726.0	1304.9	909.9	632.2	517.6	451.8	452.7	447.3
15°	3205.9	2966.0	2209.4	1511.4	918.9	585.3	438.3	413.0	404.0	413.9	408.5
17.5°	3360.1	3037.2	2017.3	1191.3	632.2	441.9	403.1	393.2	404.9	425.6	420.2
20°	3348.4	2913.7	1744.1	839.6	467.1	397.7	381.5	366.1	390.5	412.1	408.5
22.5°	3337.5	2792.9	1487.1	619.5	390.5	362.5	349.0	342.7	355.3	380.6	386.0
25°	3242.0	2733.3	1226.4	465.3	353.5	329.2	322.8	317.4	321.9	342.7	341.8
27.5°	3359.2	2582.7	946.9	390.5	327.4	298.5	293.1	284.1	275.0	293.1	295.8
30°	3334.8	2603.5	742.2	343.6	301.2	262.4	264.2	245.3	229.1	245.3	245.3
32.5°	3423.2	2452.0	594.3	312.0	275.0	247.1	224.5	204.7	193.0	202.9	204.7
35°	3552.2	2458.3	465.3	292.2	252.5	220.0	193.0	173.1	162.3	166.8	169.5
37.5°	3984.1	2415.0	388.7	276.9	244.4	203.8	175.9	149.7	142.5	147.9	150.6
40°	4265.5	2530.4	342.7	268.7	223.6	187.6	150.6	131.7	125.3	128.1	132.6
42.5°	4795.7	2594.5	320.1	259.7	204.7	160.5	129.0	118.1	109.1	112.7	116.3
45°	5363.0	2703.6	303.0	249.8	190.3	140.7	113.6	104.6	92.9	93.8	97.4
47.5°	6060.1	2963.3	283.2	232.7	170.4	128.1	101.0	87.5	76.7	75.8	80.3
50°	6996.1	3310.5	265.1	211.0	157.8	117.2	88.4	71.2	62.2	59.5	63.1
52.5°	7995.3	3759.6	246.2	195.7	142.5	102.8	75.8	57.7	49.6	47.8	50.5
55°	8985.5	4190.6	228.2	185.8	126.3	88.4	64.0	47.8	40.6	38.8	40.6
57.5°	10113.6	4656.9	204.7	165.9	110.9	76.7	53.2	39.7	33.4	31.6	32.5
60°	10963.1	4821.0	184.9	144.3	96.5	67.6	45.1	31.6	27.1	25.3	26.2
62.5°	11366.2	4553.2	165.9	125.3	84.8	58.6	37.9	26.2	22.5	20.7	20.7
65°	11261.6	3959.8	147.0	107.3	73.0	48.7	29.8	22.5	19.8	17.1	16.2
67.5°	10053.2	3098.6	125.3	90.2	61.3	39.7	25.3	21.6	18.0	16.2	13.5
70°	7972.8	2243.7	101.9	74.8	51.4	32.5	19.8	19.8	17.1	16.2	12.6
72.5°	5225.9	1412.2	83.0	60.4	42.4	25.3	15.3	18.0	16.2	16.2	11.7
75°	2264.4	505.0	66.7	48.7	35.2	17.1	13.5	16.2	17.1	16.2	13.5
77.5°	530.3	156.9	52.3	38.8	28.9	11.7	13.5	16.2	17.1	15.3	11.7
80°	199.3	66.7	34.3	25.3	22.5	7.2	11.7	9.9	9.0	6.3	1.8
82.5°	120.8	28.0	18.0	12.6	10.8	1.8	5.4	3.6	1.8	1.8	0.0
85°	85.7	13.5	9.9	9.0	5.4	0.0	0.9	0.0	0.0	0.9	0.0
87.5°	11.7	3.6	4.5	4.5	3.6	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)