

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: P368476

Luminaire Tested: **MSA-SA4C-730-U-SL3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368476
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-18)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4C-730-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: 21502 lumens
Efficiency: N/A
Efficacy: 95.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G4

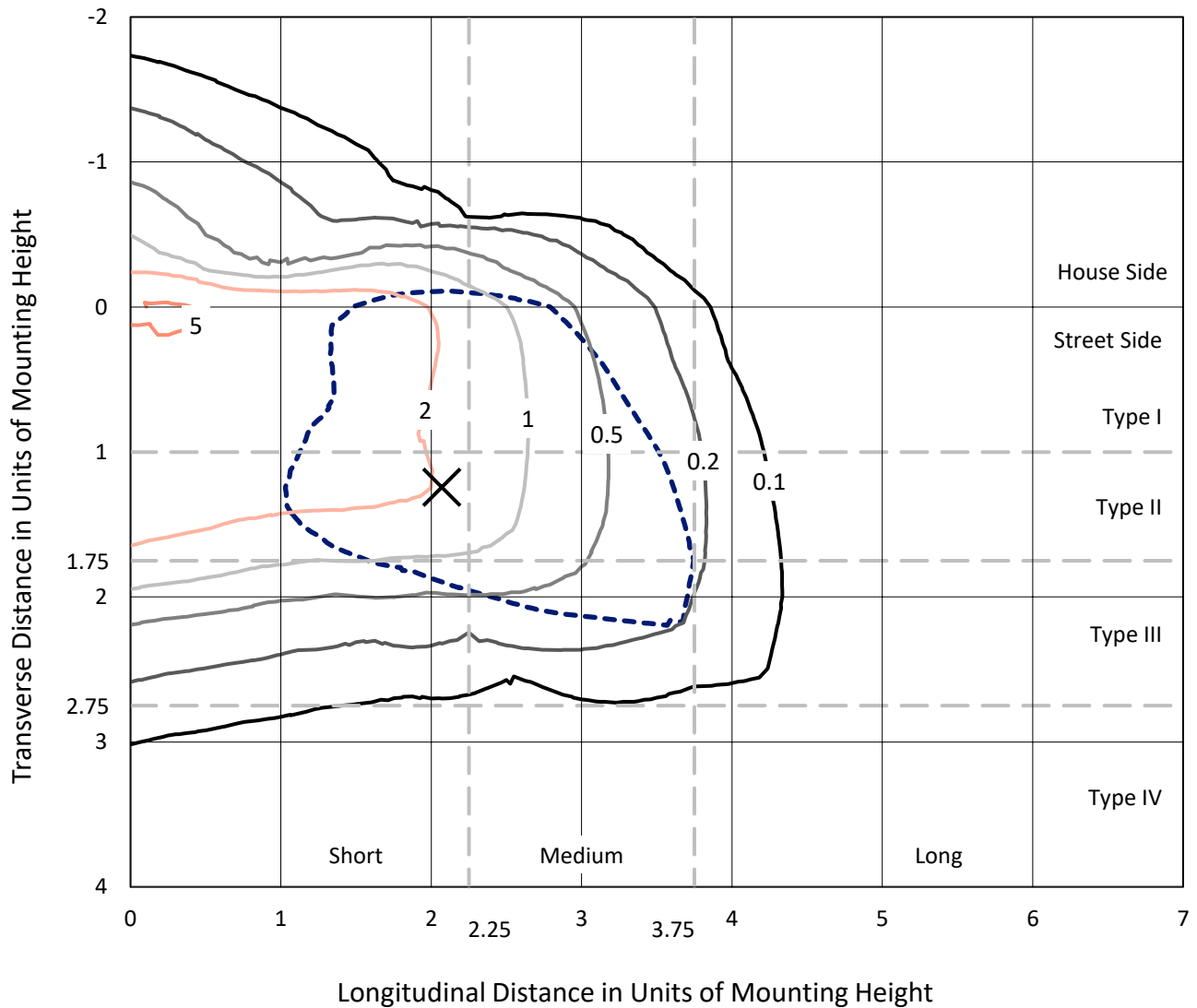
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

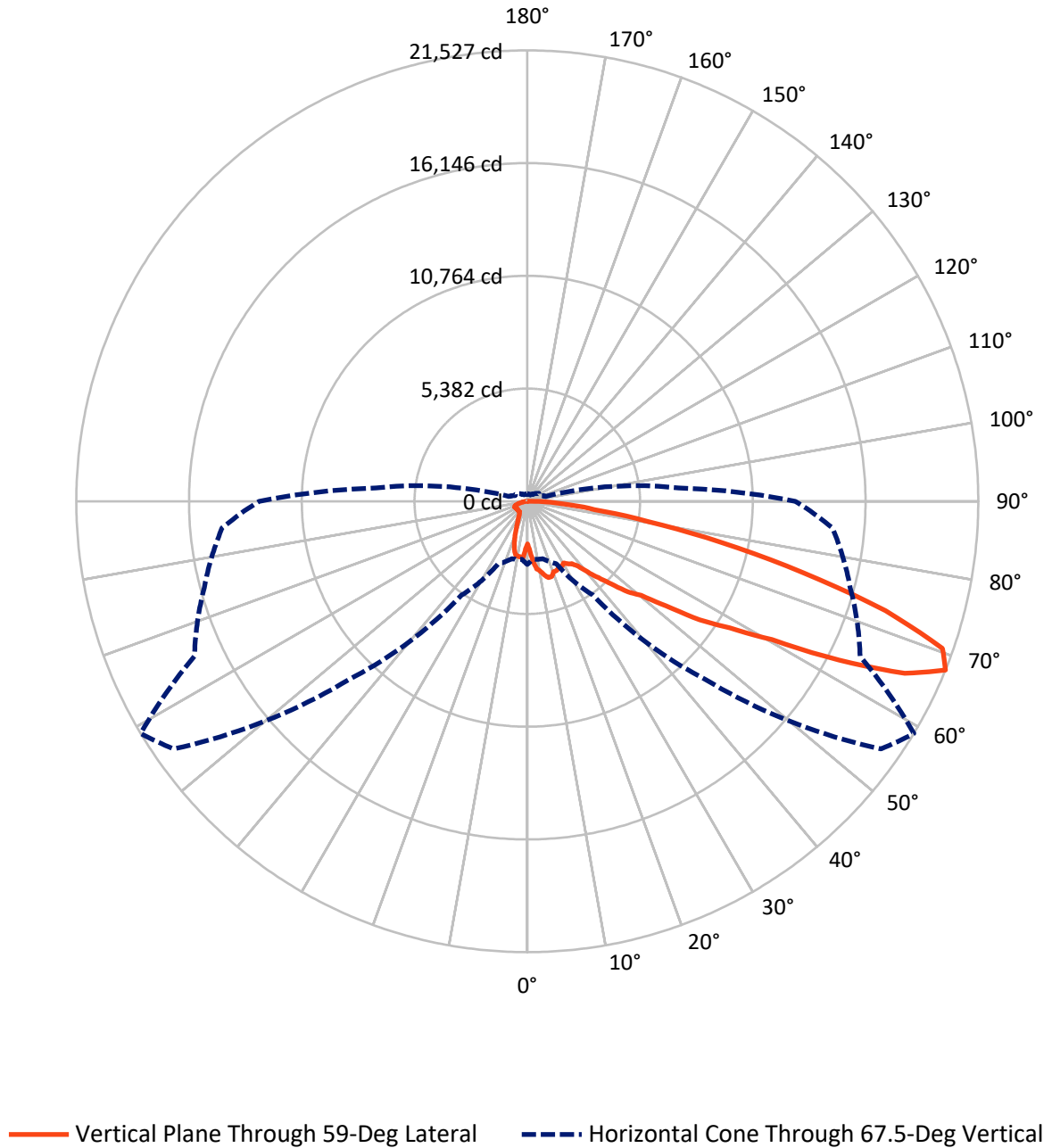
✕ Max cd
 - - - 1/2 Max cd



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



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3236.5	0.0	3236.5
	% Fixture	15.1	0.0	15.1
Street Side	Lumens	18265.5	0.0	18265.5
	% Fixture	84.9	0.0	84.9
Total	Lumens	21502.0	0.0	21502.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	265.7	1.2
10°-20°	786.4	3.7
20°-30°	1123.0	5.2
30°-40°	1654.8	7.7
40°-50°	2795.8	13.0
50°-60°	4865.3	22.6
60°-70°	6199.9	28.8
70°-80°	3282.9	15.3
80°-90°	528.1	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°	21502.0	100.0
0°-180°	21502.0	100.0

Coefficient of Utilization



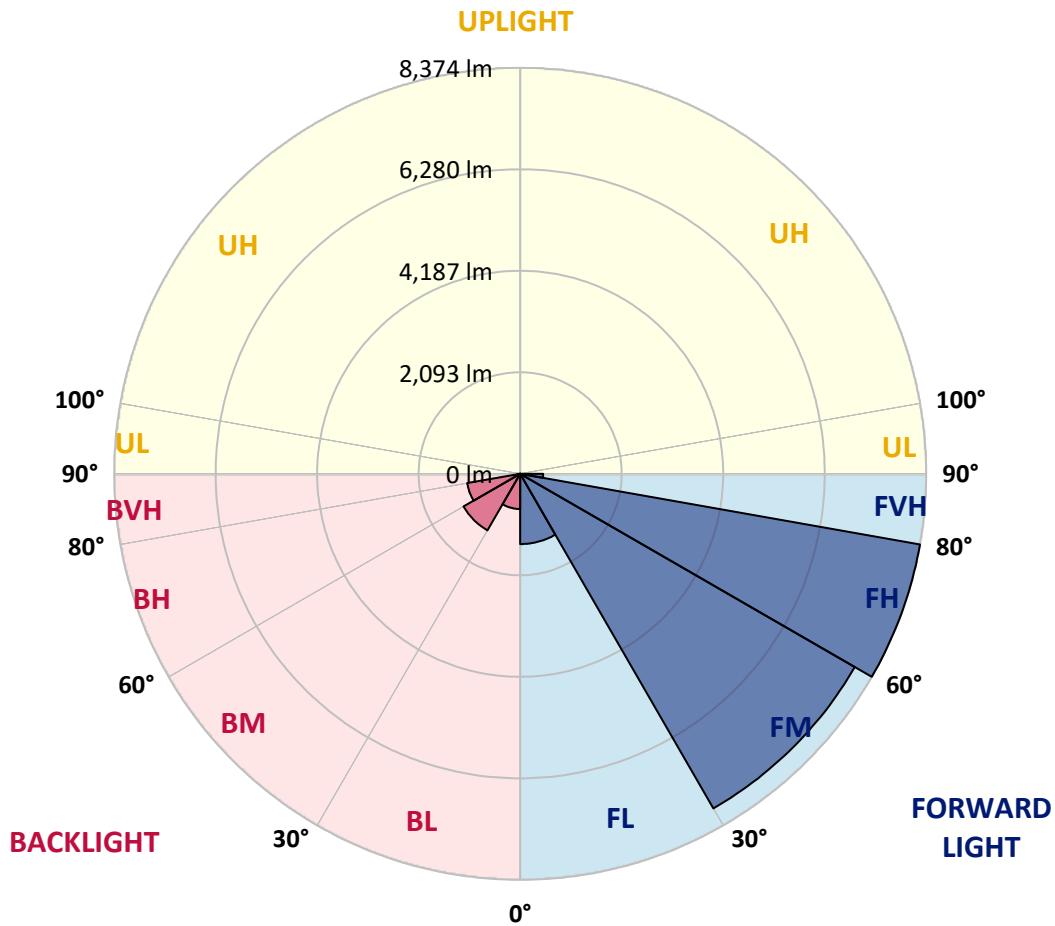
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1449.3	6.7			
FM (30°-60°)	7968.3	37.1			
FH (60°-80°)	8373.5	38.9			G4/12000
FVH (80°-90°)	474.3	2.2			G3/500
BL (0°-30°)	725.8	3.4	B2/1000		
BM (30°-60°)	1347.7	6.3	B2/2500		
BH (60°-80°)	1109.3	5.2	B3/2500		G3/2500
BVH (80°-90°)	53.8	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°	2034.7	2034.7	2034.7	2034.7	2034.7	2034.7	2034.7	2034.7	2034.7	2034.7	2034.7
2.5°	2540.4	2421.9	2296.2	2331.7	2403.7	2436.5	2400.9	2366.3	2321.7	2268.8	2449.2
5°	3080.7	2904.8	2879.3	2878.4	2852.9	2750.8	2882.0	2872.9	2925.8	2980.5	3120.8
7.5°	3234.7	3169.1	3098.0	3131.7	3003.2	2997.8	3201.9	3260.2	3362.2	3328.5	3517.1
10°	3155.4	3081.6	3119.0	3105.3	3117.1	3252.0	3376.8	3380.5	3489.8	3597.3	3476.1
12.5°	3016.0	3021.5	3170.0	3164.5	3355.9	3606.4	3643.8	3614.6	3793.2	3720.3	3824.2
15°	3115.3	3181.8	3144.5	3176.4	3252.0	3570.9	3674.8	3780.5	3949.9	4015.6	3911.7
17.5°	3273.9	3309.4	3141.7	3124.4	3280.2	3431.5	3689.4	3779.6	3806.0	4273.4	4126.7
20°	3206.4	3278.4	3114.4	2903.9	3162.7	3363.2	3617.4	3590.0	3718.5	4293.5	4171.4
22.5°	3397.8	3278.4	3069.8	2920.3	3011.4	3195.5	3411.4	3590.9	3743.1	4175.9	4236.1
25°	3434.2	3377.7	3182.7	3034.2	3003.2	3068.8	3376.8	3494.4	3751.3	4336.3	4201.4
27.5°	3656.5	3571.8	3174.5	3179.1	3025.1	2909.4	3267.5	3514.4	3844.3	4237.0	4286.2
30°	3932.6	3867.9	3369.5	3387.8	3174.5	2961.3	3342.2	3416.9	3898.0	4391.9	4392.8
32.5°	4139.5	4253.4	3753.1	3505.3	3429.7	3270.2	3227.4	3563.6	3835.1	4672.5	4575.0
35°	4512.1	4600.5	4048.4	3849.7	3593.7	3414.2	3539.0	3660.2	4096.6	5041.5	4845.6
37.5°	5201.9	5099.9	4596.9	4284.3	4188.7	3929.9	3999.2	3914.4	4380.9	5456.1	5375.9
40°	5601.0	5512.6	4983.2	4810.1	4431.0	4463.9	4377.3	4439.2	4760.9	5897.1	5871.6
42.5°	5994.6	5876.2	5428.8	5308.5	4930.4	4770.0	4785.5	4986.0	5346.8	6609.7	6524.9
45°	6383.7	6080.3	5884.4	5916.3	5734.0	5405.1	5427.9	5616.5	5986.4	7424.3	7229.3
47.5°	6681.7	6431.1	6278.0	6238.8	6148.6	6588.7	6391.9	6468.4	6631.5	8149.6	8075.8
50°	7245.7	6953.2	6753.6	6697.1	7003.3	7615.6	7214.7	7049.8	7396.9	9087.2	9048.9
52.5°	8148.6	7784.2	7451.6	7448.0	7890.8	8288.1	8570.5	8286.2	8413.8	10047.5	10156.9
55°	8936.8	8514.9	8216.1	8381.0	9011.5	9254.8	10214.3	9992.0	9884.4	11017.0	11329.6
57.5°	9231.1	8738.2	8543.2	8786.5	9715.9	10966.0	11980.1	11395.2	11290.4	12114.1	12769.2
60°	8585.1	8063.9	8075.8	8534.1	10144.1	12222.5	13910.9	13414.3	12800.2	13479.9	14119.6
62.5°	6744.5	6273.4	6580.5	7277.6	9785.1	13443.5	16498.7	16708.2	14525.1	14612.5	14868.6
65°	4584.1	4257.9	4534.9	5217.4	7936.3	14109.6	18963.4	19803.5	16095.9	15354.2	15192.0
67.5°	3016.9	2786.4	2840.1	3293.9	5463.4	12028.4	20611.7	21527.4	17531.9	15962.9	14621.6
70°	2336.3	2150.4	2126.7	2364.5	3240.1	8356.4	19634.9	21027.2	18406.7	15392.5	12744.6
72.5°	1833.3	1692.1	1704.8	1933.5	2509.4	4636.1	15193.9	17880.9	17089.1	13274.9	9791.5
75°	1429.6	1313.9	1378.6	1640.1	2320.8	2881.1	10483.1	13571.1	13212.1	9829.8	5584.6
77.5°	1037.8	963.1	1055.1	1396.8	2181.4	2472.0	6525.8	9468.0	8463.9	5047.0	1916.2
80°	680.6	638.7	714.4	1139.0	1978.2	2379.1	4032.9	5801.5	4182.3	1417.8	725.3
82.5°	400.9	382.7	445.6	770.9	1590.0	2229.6	2689.8	3223.7	1711.2	599.6	385.4
85°	210.5	196.8	264.2	442.8	1096.1	2035.6	2117.6	1929.9	826.4	260.6	184.1
87.5°	70.2	68.3	112.1	171.3	414.6	1080.7	1129.9	916.6	340.8	75.6	40.1
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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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2034.7	2034.7	2034.7	2034.7	2034.7	2034.7	2034.7	2034.7	2034.7	2034.7	2034.7
2.5°	2473.8	2437.4	2227.8	2257.0	2284.3	2270.7	2262.5	2167.7	2158.6	2293.4	2282.5
5°	3117.1	2965.9	2787.3	2779.1	2661.5	2541.3	2565.0	2526.7	2537.6	2593.2	2598.7
7.5°	3457.0	3268.4	3098.0	2821.0	2585.9	2395.5	2425.6	2416.4	2391.8	2517.6	2551.3
10°	3450.6	3283.0	3090.7	2755.4	2596.9	2442.0	2256.1	2080.2	2028.3	1966.3	1971.8
12.5°	3678.4	3529.9	3110.8	2769.1	2554.0	2287.1	1939.0	1746.7	1562.7	1559.0	1512.6
15°	3749.5	3640.1	3153.6	2690.7	2254.2	1871.6	1511.6	1303.0	1169.9	1143.5	1104.3
17.5°	3929.0	3757.7	3023.3	2437.4	1906.2	1463.3	1136.2	990.4	979.5	997.7	977.7
20°	3940.8	3662.9	2788.2	2062.9	1531.7	1108.9	926.7	853.8	893.0	937.6	935.8
22.5°	3930.8	3543.6	2585.0	1744.0	1150.8	891.1	811.9	795.5	831.9	898.4	906.6
25°	3828.8	3504.4	2330.8	1432.4	934.0	763.6	741.7	751.7	797.3	875.6	875.6
27.5°	3935.4	3344.9	2011.9	1165.4	785.4	679.7	695.2	720.7	754.5	843.7	860.2
30°	3900.7	3397.8	1754.9	938.5	692.5	621.4	656.0	681.6	719.8	812.8	821.0
32.5°	3993.7	3256.5	1539.0	789.1	631.4	598.6	606.8	641.5	691.6	764.5	779.1
35°	4135.8	3308.5	1291.1	709.8	601.4	572.2	587.7	615.0	665.2	736.2	748.1
37.5°	4589.6	3305.7	1119.8	666.1	595.9	566.8	574.0	593.2	651.5	716.2	743.5
40°	4881.2	3495.3	964.0	656.0	589.5	564.0	557.6	578.6	625.1	701.6	720.7
42.5°	5428.8	3611.0	896.6	652.4	588.6	548.5	542.1	566.8	612.3	683.4	712.5
45°	6007.4	3775.9	842.8	650.6	585.9	545.8	526.7	557.6	595.9	664.2	698.0
47.5°	6688.0	4124.9	812.8	644.2	580.4	549.4	521.2	536.7	579.5	647.8	681.6
50°	7579.2	4586.9	819.1	635.1	588.6	550.4	513.0	520.3	559.5	626.0	660.6
52.5°	8662.6	5302.1	860.2	638.7	594.1	545.8	509.3	505.7	539.4	597.7	632.4
55°	9968.3	6317.2	983.2	656.0	594.1	544.9	503.9	487.5	513.0	560.4	594.1
57.5°	11543.7	7492.6	1223.7	664.2	589.5	539.4	492.0	462.9	478.4	517.5	549.4
60°	12896.8	8441.1	1471.5	669.7	598.6	526.7	468.3	431.9	441.9	472.0	500.2
62.5°	13586.5	8707.2	1546.3	665.2	623.2	518.5	440.1	399.1	400.0	425.5	451.0
65°	13715.9	8352.8	1246.5	660.6	655.1	517.5	420.1	370.8	364.5	382.7	404.6
67.5°	12793.8	7250.2	899.3	650.6	658.8	512.1	406.4	348.1	331.7	344.4	362.6
70°	10863.0	5838.8	755.4	630.5	615.0	484.7	382.7	324.4	302.5	311.6	325.3
72.5°	8098.5	4319.9	658.8	587.7	535.8	414.6	346.2	298.0	275.2	281.6	291.6
75°	4499.4	2304.4	551.3	511.2	437.4	335.3	295.2	264.2	244.2	246.9	257.9
77.5°	1494.3	850.1	404.6	405.5	330.8	258.8	243.3	226.0	210.5	211.4	220.5
80°	677.0	470.2	289.8	291.6	230.5	187.7	186.8	181.3	171.3	168.6	174.9
82.5°	392.7	285.2	198.6	189.5	148.5	122.1	135.8	133.0	130.3	120.3	122.1
85°	193.2	153.1	103.9	98.4	82.0	61.0	72.9	75.6	72.9	62.0	61.0
87.5°	47.4	50.1	25.5	23.7	13.7	6.4	10.9	10.9	13.7	9.1	4.6
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)