

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: P368542

Luminaire Tested: **MSA-SA4C-760-U-SL3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368542
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-760-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: 23610 lumens
Efficiency: N/A
Efficacy: 104.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G4

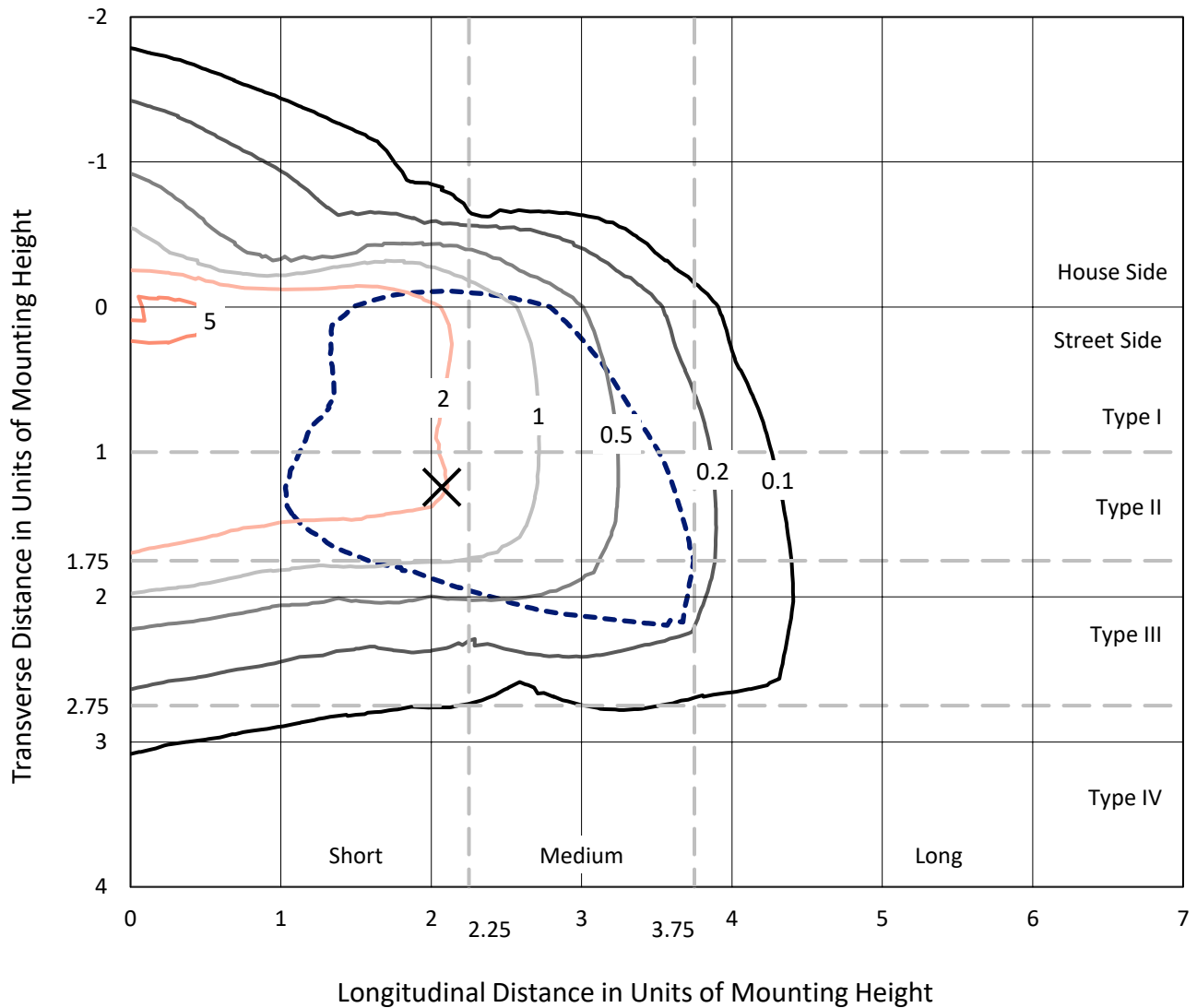
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

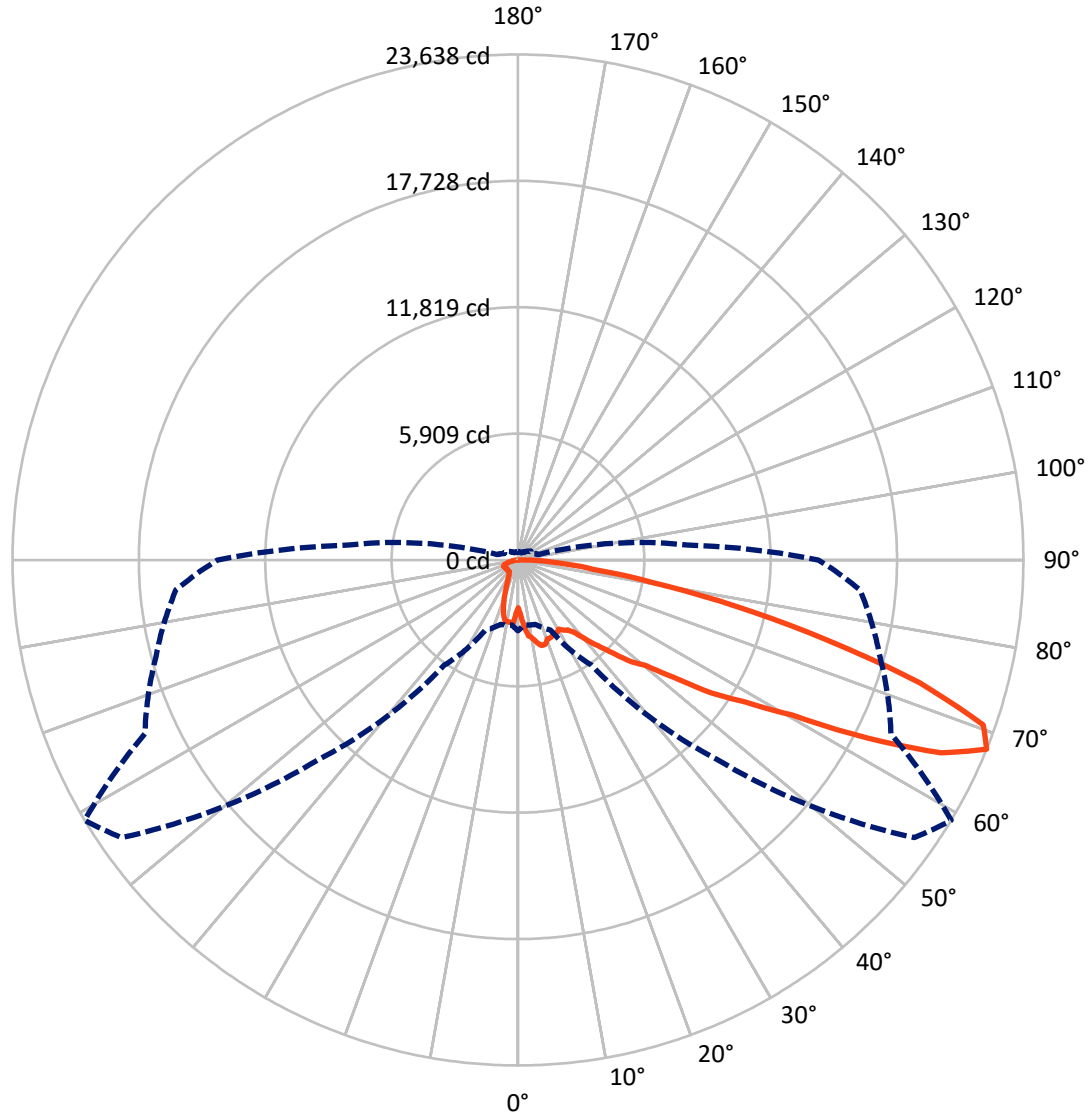
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.1 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	3553.8	0.0	3553.8
	% Fixture	15.1	0.0	15.1
Street Side	Lumens	20056.2	0.0	20056.2
	% Fixture	84.9	0.0	84.9
Total	Lumens	23610.0	0.0	23610.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	291.8	1.2
10°-20°	863.5	3.7
20°-30°	1233.1	5.2
30°-40°	1817.1	7.7
40°-50°	3069.9	13.0
50°-60°	5342.3	22.6
60°-70°	6807.7	28.8
70°-80°	3604.8	15.3
80°-90°	579.9	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°	23610.0	100.0
0°-180°	23610.0	100.0

Coefficient of Utilization



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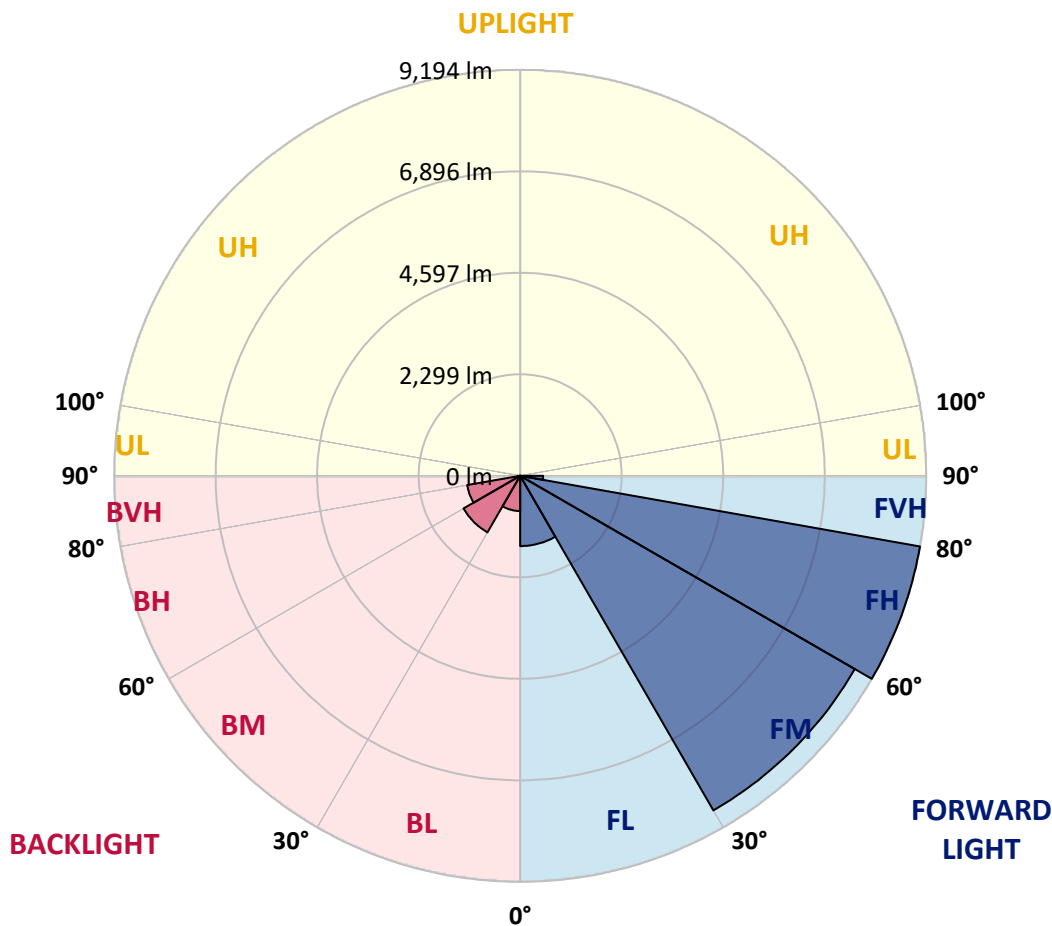
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1591.4	6.7			
FM (30°-60°)	8749.5	37.1			
FH (60°-80°)	9194.5	38.9			G4/12000
FVH (80°-90°)	520.8	2.2			G4/750
BL (0°-30°)	797.0	3.4	B2/1000		
BM (30°-60°)	1479.8	6.3	B2/2500		
BH (60°-80°)	1218.0	5.2	B3/2500		G3/2500
BVH (80°-90°)	59.0	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°	2234.1	2234.1	2234.1	2234.1	2234.1	2234.1	2234.1	2234.1	2234.1	2234.1	2234.1
2.5°	2789.4	2659.3	2521.3	2560.3	2639.3	2675.4	2636.3	2598.3	2549.3	2491.3	2689.4
5°	3382.7	3189.6	3161.6	3160.6	3132.6	3020.5	3164.6	3154.6	3212.6	3272.7	3426.7
7.5°	3551.8	3479.8	3401.7	3438.7	3297.7	3291.7	3515.8	3579.8	3691.9	3654.8	3862.0
10°	3464.7	3383.7	3424.7	3409.7	3422.7	3570.8	3707.9	3711.9	3831.9	3950.0	3816.9
12.5°	3311.7	3317.7	3480.8	3474.8	3684.9	3960.0	4001.0	3969.0	4165.1	4085.1	4199.1
15°	3420.7	3493.8	3452.7	3487.8	3570.8	3921.0	4035.0	4151.1	4337.2	4409.2	4295.2
17.5°	3594.8	3633.8	3449.7	3430.7	3601.8	3767.9	4051.0	4150.1	4179.1	4692.4	4531.3
20°	3520.8	3599.8	3419.7	3188.6	3472.8	3692.9	3972.0	3942.0	4083.1	4714.4	4580.3
22.5°	3730.9	3599.8	3370.7	3206.6	3306.7	3508.8	3745.9	3943.0	4110.1	4585.3	4651.3
25°	3770.9	3708.9	3494.8	3331.7	3297.7	3369.7	3707.9	3836.9	4119.1	4761.4	4613.3
27.5°	4015.0	3922.0	3485.8	3490.8	3321.7	3194.6	3587.8	3858.9	4221.1	4652.3	4706.4
30°	4318.2	4247.1	3699.9	3719.9	3485.8	3251.6	3669.9	3751.9	4280.2	4822.4	4823.4
32.5°	4545.3	4670.4	4121.1	3848.9	3765.9	3590.8	3543.8	3913.0	4211.1	5130.6	5023.5
35°	4954.5	5051.6	4445.2	4227.1	3946.0	3748.9	3886.0	4019.0	4498.3	5535.8	5320.7
37.5°	5711.9	5599.8	5047.5	4704.4	4599.3	4315.2	4391.2	4298.2	4810.4	5991.0	5903.0
40°	6150.1	6053.1	5471.8	5281.7	4865.5	4901.5	4806.4	4874.5	5227.6	6475.3	6447.3
42.5°	6582.3	6452.3	5961.0	5828.9	5413.7	5237.6	5254.7	5474.8	5871.0	7257.7	7164.6
45°	7009.5	6676.4	6461.3	6496.3	6296.2	5935.0	5960.0	6167.1	6573.3	8152.1	7938.0
47.5°	7336.7	7061.6	6893.5	6850.5	6751.4	7234.7	7018.5	7102.6	7281.7	8948.5	8867.5
50°	7956.0	7634.9	7415.7	7353.7	7689.9	8362.2	7922.0	7740.9	8122.1	9978.0	9936.0
52.5°	8947.5	8547.3	8182.1	8178.1	8664.4	9100.6	9410.8	9098.6	9238.7	11032.6	11152.6
55°	9813.0	9349.7	9021.6	9202.6	9895.0	10162.1	11215.7	10971.5	10853.5	12097.1	12440.3
57.5°	10136.1	9594.8	9380.7	9647.9	10668.4	12041.1	13154.6	12512.3	12397.3	13301.7	14021.1
60°	9426.8	8854.5	8867.5	9370.7	11138.6	13420.8	15274.7	14729.4	14055.1	14801.5	15503.8
62.5°	7405.7	6888.5	7225.6	7991.0	10744.4	14761.5	18116.2	18346.3	15949.1	16045.1	16326.2
65°	5033.5	4675.4	4979.5	5728.9	8714.4	15492.8	20822.5	21745.0	17673.9	16859.5	16681.4
67.5°	3312.7	3059.5	3118.6	3616.8	5999.0	13207.7	22632.4	23637.9	19250.7	17527.9	16055.1
70°	2565.3	2361.2	2335.2	2596.3	3557.8	9175.6	21559.9	23088.7	20211.2	16901.5	13994.1
72.5°	2013.0	1857.9	1871.9	2123.1	2755.4	5090.6	16683.4	19633.9	18764.5	14576.4	10751.4
75°	1569.8	1442.7	1513.8	1800.9	2548.3	3163.6	11510.8	14901.5	14507.3	10793.5	6132.1
77.5°	1139.6	1057.5	1158.6	1533.8	2395.2	2714.4	7165.6	10396.3	9293.7	5541.8	2104.1
80°	747.4	701.4	784.4	1250.6	2172.1	2612.3	4428.2	6370.2	4592.3	1556.8	796.4
82.5°	440.2	420.2	489.2	846.4	1745.9	2448.2	2953.5	3539.8	1878.9	658.3	423.2
85°	231.1	216.1	290.1	486.2	1203.6	2235.1	2325.2	2119.1	907.5	286.1	202.1
87.5°	77.0	75.0	123.1	188.1	455.2	1186.6	1240.6	1006.5	374.2	83.0	44.0
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2234.1	2234.1	2234.1	2234.1	2234.1	2234.1	2234.1	2234.1	2234.1	2234.1	2234.1
2.5°	2716.4	2676.4	2446.2	2478.3	2508.3	2493.3	2484.3	2380.2	2370.2	2518.3	2506.3
5°	3422.7	3256.6	3060.5	3051.5	2922.5	2790.4	2816.4	2774.4	2786.4	2847.4	2853.4
7.5°	3795.9	3588.8	3401.7	3097.6	2839.4	2630.3	2663.3	2653.3	2626.3	2764.4	2801.4
10°	3788.9	3604.8	3393.7	3025.5	2851.4	2681.4	2477.3	2284.2	2227.1	2159.1	2165.1
12.5°	4039.0	3876.0	3415.7	3040.5	2804.4	2511.3	2129.1	1918.0	1715.9	1711.9	1660.8
15°	4117.1	3997.0	3462.7	2954.5	2475.3	2055.0	1659.8	1430.7	1284.6	1255.6	1212.6
17.5°	4314.2	4126.1	3319.7	2676.4	2093.1	1606.8	1247.6	1087.5	1075.5	1095.6	1073.5
20°	4327.2	4022.0	3061.5	2265.1	1681.8	1217.6	1017.5	937.5	980.5	1029.5	1027.5
22.5°	4316.2	3891.0	2838.4	1915.0	1263.6	978.5	891.5	873.4	913.5	986.5	995.5
25°	4204.1	3847.9	2559.3	1572.8	1025.5	838.4	814.4	825.4	875.4	961.5	961.5
27.5°	4321.2	3672.9	2209.1	1279.6	862.4	746.4	763.4	791.4	828.4	926.5	944.5
30°	4283.2	3730.9	1927.0	1030.5	760.4	682.3	720.4	748.4	790.4	892.5	901.5
32.5°	4385.2	3575.8	1689.9	866.4	693.4	657.3	666.3	704.4	759.4	839.4	855.4
35°	4541.3	3632.8	1417.7	779.4	660.3	628.3	645.3	675.3	730.4	808.4	821.4
37.5°	5039.5	3629.8	1229.6	731.4	654.3	622.3	630.3	651.3	715.4	786.4	816.4
40°	5359.7	3837.9	1058.5	720.4	647.3	619.3	612.3	635.3	686.3	770.4	791.4
42.5°	5961.0	3965.0	984.5	716.4	646.3	602.3	595.3	622.3	672.3	750.4	782.4
45°	6596.3	4146.1	925.5	714.4	643.3	599.3	578.3	612.3	654.3	729.4	766.4
47.5°	7343.7	4529.3	892.5	707.4	637.3	603.3	572.3	589.3	636.3	711.4	748.4
50°	8322.2	5036.5	899.5	697.4	646.3	604.3	563.3	571.3	614.3	687.3	725.4
52.5°	9511.8	5821.9	944.5	701.4	652.3	599.3	559.3	555.3	592.3	656.3	694.4
55°	10945.5	6936.5	1079.5	720.4	652.3	598.3	553.3	535.3	563.3	615.3	652.3
57.5°	12675.4	8227.2	1343.7	729.4	647.3	592.3	540.3	508.3	525.3	568.3	603.3
60°	14161.2	9268.7	1615.8	735.4	657.3	578.3	514.3	474.2	485.2	518.3	549.3
62.5°	14918.5	9560.8	1697.9	730.4	684.3	569.3	483.2	438.2	439.2	467.2	495.3
65°	15060.6	9171.6	1368.7	725.4	719.4	568.3	461.2	407.2	400.2	420.2	444.2
67.5°	14048.1	7961.0	987.5	714.4	723.4	562.3	446.2	382.2	364.2	378.2	398.2
70°	11928.0	6411.2	829.4	692.3	675.3	532.3	420.2	356.2	332.2	342.2	357.2
72.5°	8892.5	4743.4	723.4	645.3	588.3	455.2	380.2	327.2	302.2	309.2	320.2
75°	4940.5	2530.3	605.3	561.3	480.2	368.2	324.2	290.1	268.1	271.1	283.1
77.5°	1640.8	933.5	444.2	445.2	363.2	284.1	267.1	248.1	231.1	232.1	242.1
80°	743.4	516.3	318.2	320.2	253.1	206.1	205.1	199.1	188.1	185.1	192.1
82.5°	431.2	313.2	218.1	208.1	163.1	134.1	149.1	146.1	143.1	132.1	134.1
85°	212.1	168.1	114.1	108.1	90.0	67.0	80.0	83.0	80.0	68.0	67.0
87.5°	52.0	55.0	28.0	26.0	15.0	7.0	12.0	12.0	15.0	10.0	5.0
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)