

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: P368608

Luminaire Tested: **MSA-SA4D-730-U-SL3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368608
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-SA4D-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: 23509 lumens
Efficiency: N/A
Efficacy: 90.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G4

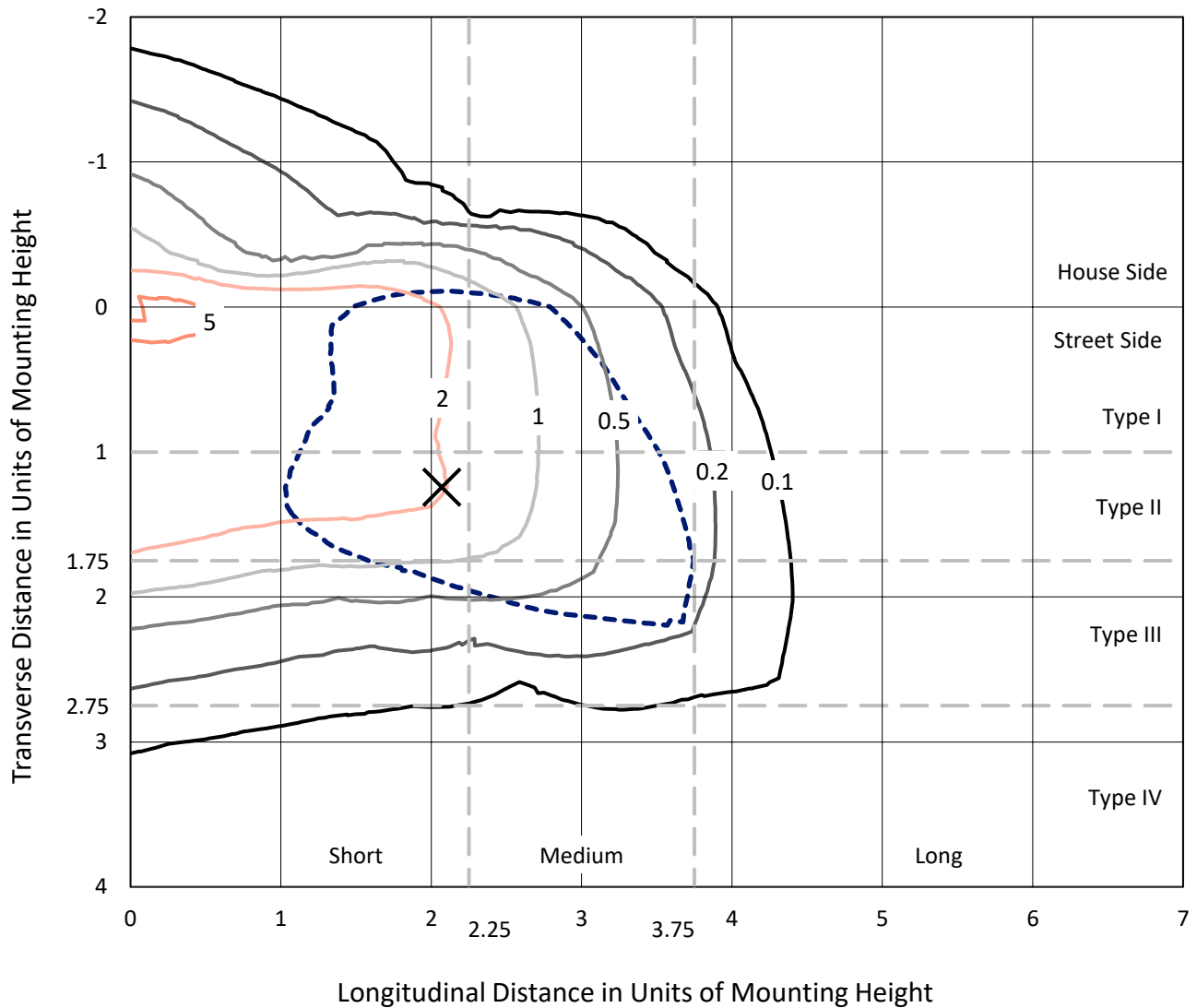
Input Watts (W): 259
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

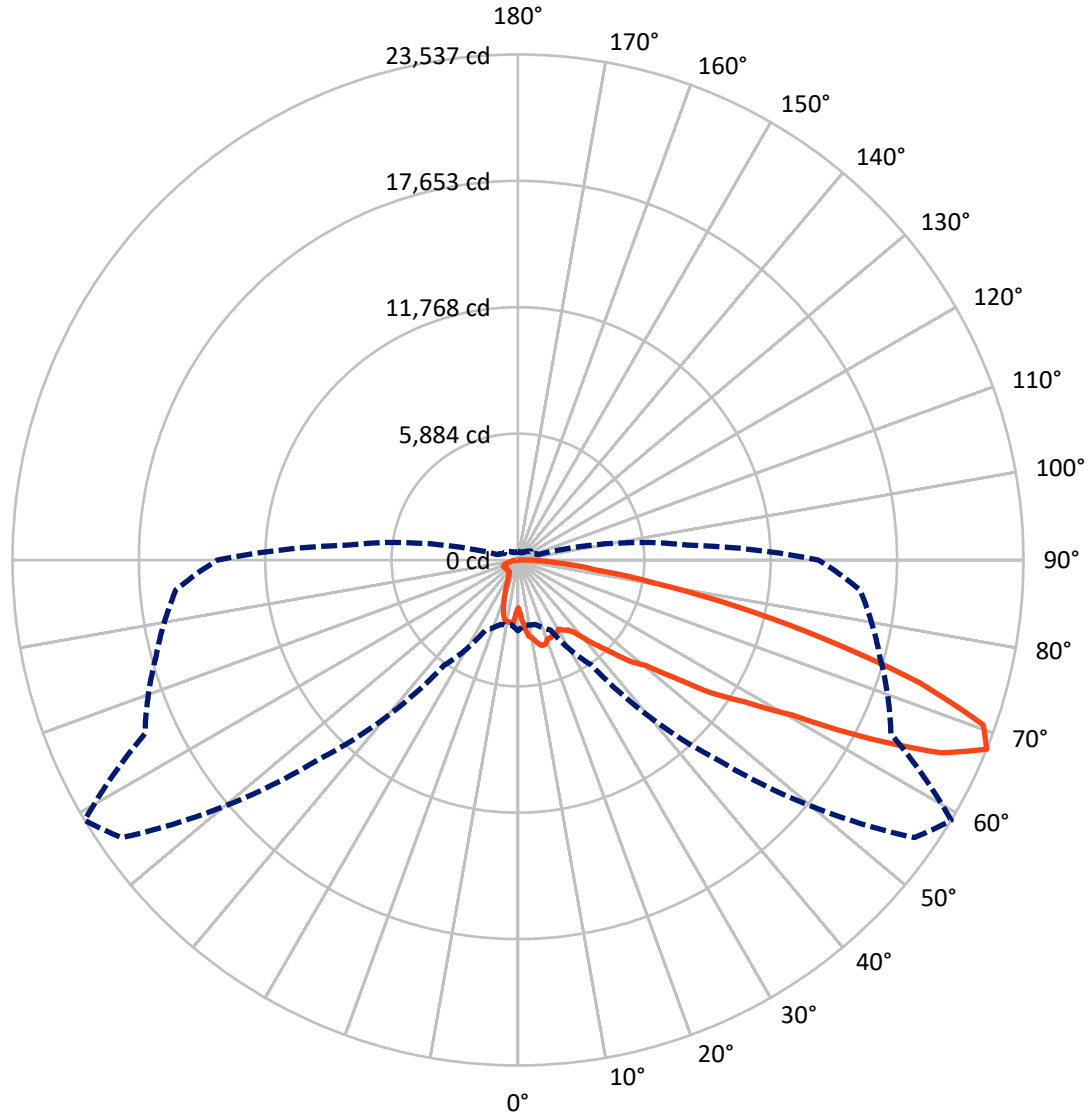
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 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	3538.6	0.0	3538.6
	% Fixture	15.1	0.0	15.1
Street Side	Lumens	19970.4	0.0	19970.4
	% Fixture	84.9	0.0	84.9
Total	Lumens	23509.0	0.0	23509.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	290.5	1.2
10°-20°	859.8	3.7
20°-30°	1227.8	5.2
30°-40°	1809.3	7.7
40°-50°	3056.8	13.0
50°-60°	5319.5	22.6
60°-70°	6778.6	28.8
70°-80°	3589.3	15.3
80°-90°	577.4	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°	23509.0	100.0
0°-180°	23509.0	100.0

Coefficient of Utilization

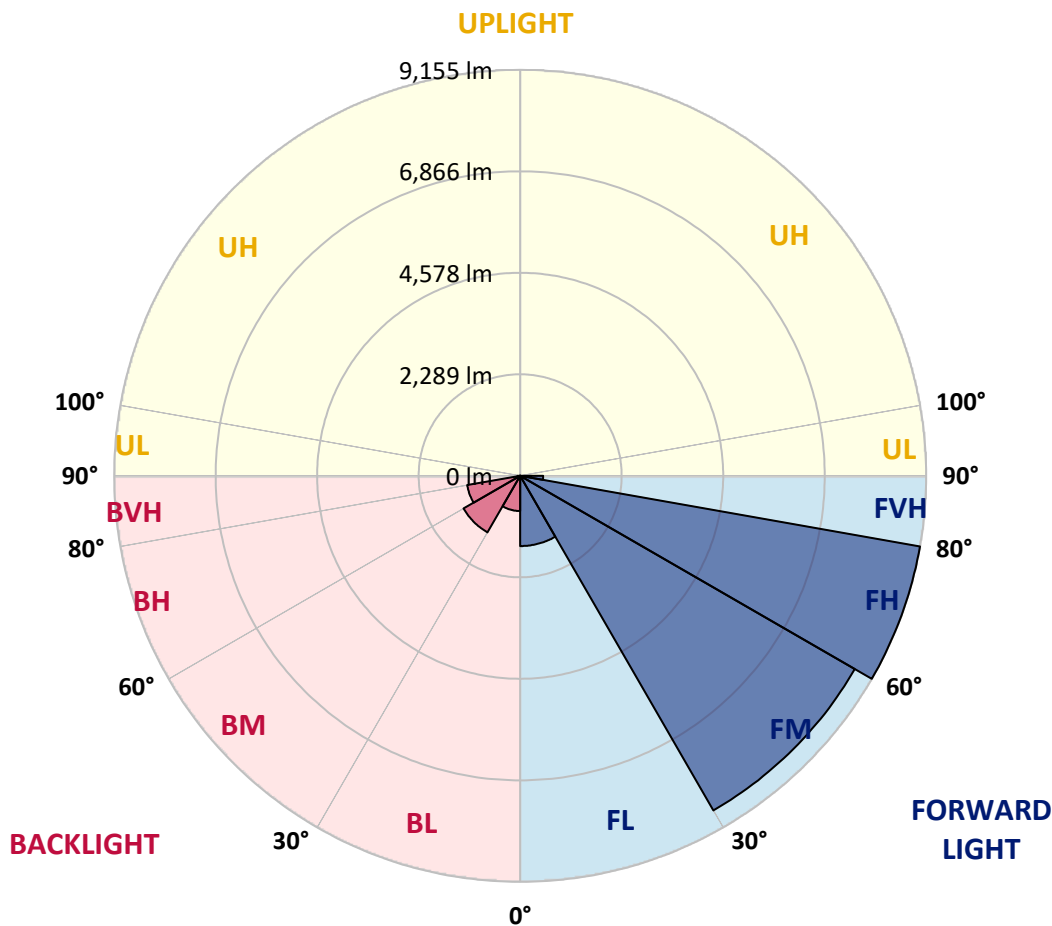


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1584.6	6.7			
FM (30°-60°)	8712.1	37.1			
FH (60°-80°)	9155.1	38.9			G4/12000
FVH (80°-90°)	518.6	2.2			G4/750
BL (0°-30°)	793.5	3.4	B2/1000		
BM (30°-60°)	1473.4	6.3	B2/2500		
BH (60°-80°)	1212.8	5.2	B3/2500		G3/2500
BVH (80°-90°)	58.8	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°	2224.6	2224.6	2224.6	2224.6	2224.6	2224.6	2224.6	2224.6	2224.6	2224.6	2224.6
2.5°	2777.5	2648.0	2510.5	2549.3	2628.0	2663.9	2625.1	2587.2	2538.4	2480.6	2677.9
5°	3368.2	3176.0	3148.1	3147.1	3119.2	3007.6	3151.1	3141.1	3198.9	3258.7	3412.1
7.5°	3536.6	3464.9	3387.2	3424.0	3283.6	3277.6	3500.7	3564.5	3676.1	3639.2	3845.4
10°	3449.9	3369.2	3410.1	3395.1	3408.1	3555.5	3692.0	3696.0	3815.5	3933.1	3800.6
12.5°	3297.5	3303.5	3465.9	3459.9	3669.1	3943.1	3983.9	3952.0	4147.3	4067.6	4181.2
15°	3406.1	3478.8	3438.0	3472.8	3555.5	3904.2	4017.8	4133.3	4318.6	4390.4	4276.8
17.5°	3579.4	3618.3	3435.0	3416.1	3586.4	3751.8	4033.7	4132.3	4161.2	4672.3	4511.9
20°	3505.7	3584.4	3405.1	3175.0	3457.9	3677.1	3955.0	3925.1	4065.6	4694.2	4560.7
22.5°	3714.9	3584.4	3356.3	3192.9	3292.5	3493.8	3729.9	3926.1	4092.5	4565.7	4631.5
25°	3754.8	3693.0	3479.8	3317.4	3283.6	3355.3	3692.0	3820.5	4101.5	4741.0	4593.6
27.5°	3997.9	3905.2	3470.8	3475.8	3307.5	3180.9	3572.5	3842.4	4203.1	4632.4	4686.2
30°	4299.7	4229.0	3684.0	3704.0	3470.8	3237.7	3654.2	3735.8	4261.9	4801.8	4802.8
32.5°	4525.9	4650.4	4103.5	3832.5	3749.8	3575.5	3528.6	3896.2	4193.1	5108.6	5002.0
35°	4933.3	5029.9	4426.2	4209.1	3929.1	3732.9	3869.3	4001.8	4479.0	5512.1	5297.9
37.5°	5687.5	5575.9	5026.0	4684.3	4579.6	4296.7	4372.4	4279.8	4789.9	5965.4	5877.7
40°	6123.8	6027.2	5448.4	5259.1	4844.6	4880.5	4785.9	4853.6	5205.3	6447.6	6419.7
42.5°	6554.2	6424.7	5935.5	5804.0	5390.6	5215.2	5232.2	5451.3	5845.9	7226.6	7134.0
45°	6979.6	6647.8	6433.6	6468.5	6269.2	5909.6	5934.5	6140.7	6545.2	8117.2	7904.1
47.5°	7305.3	7031.4	6864.0	6821.2	6722.5	7203.7	6988.5	7072.2	7250.5	8910.2	8829.5
50°	7922.0	7602.2	7384.0	7322.3	7657.0	8326.5	7888.1	7707.8	8087.4	9935.4	9893.5
52.5°	8909.2	8510.8	8147.1	8143.1	8627.3	9061.7	9370.5	9059.7	9199.1	10985.4	11104.9
55°	9771.0	9309.7	8983.0	9163.3	9852.7	10118.7	11167.7	10924.6	10807.1	12045.4	12387.1
57.5°	10092.8	9553.8	9340.6	9606.6	10622.8	11989.6	13098.4	12458.8	12344.2	13244.8	13961.1
60°	9386.4	8816.6	8829.5	9330.6	11091.0	13363.4	15209.4	14666.4	13995.0	14738.2	15437.5
62.5°	7374.1	6859.0	7194.7	7956.9	10698.5	14698.3	18038.7	18267.8	15880.8	15976.5	16256.4
65°	5012.0	4655.4	4958.2	5704.4	8677.1	15426.5	20733.4	21652.0	17598.3	16787.4	16610.1
67.5°	3298.5	3046.5	3105.2	3601.4	5973.4	13151.2	22535.6	23536.8	19168.4	17452.9	15986.4
70°	2554.3	2351.1	2325.2	2585.2	3542.6	9136.4	21467.7	22989.9	20124.7	16829.2	13934.2
72.5°	2004.4	1850.0	1863.9	2114.0	2743.6	5068.8	16612.1	19549.9	18684.2	14514.0	10705.4
75°	1563.1	1436.6	1507.3	1793.2	2537.4	3150.1	11461.6	14837.8	14445.3	10747.3	6105.9
77.5°	1134.7	1053.0	1153.6	1527.2	2385.0	2702.8	7135.0	10351.8	9253.9	5518.1	2095.1
80°	744.2	698.4	781.0	1245.3	2162.8	2601.1	4409.3	6343.0	4572.7	1550.1	793.0
82.5°	438.3	418.4	487.2	842.8	1738.4	2437.8	2940.9	3524.6	1870.9	655.5	421.4
85°	230.1	215.2	288.9	484.2	1198.5	2225.6	2315.2	2110.0	903.6	284.9	201.2
87.5°	76.7	74.7	122.5	187.3	453.3	1181.5	1235.3	1002.2	372.6	82.7	43.8
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°	2224.6	2224.6	2224.6	2224.6	2224.6	2224.6	2224.6	2224.6	2224.6	2224.6	2224.6
2.5°	2704.8	2664.9	2435.8	2467.7	2497.5	2482.6	2473.6	2370.0	2360.1	2507.5	2495.5
5°	3408.1	3242.7	3047.5	3038.5	2910.0	2778.5	2804.4	2762.5	2774.5	2835.3	2841.2
7.5°	3779.7	3573.5	3387.2	3084.3	2827.3	2619.1	2652.0	2642.0	2615.1	2752.6	2789.4
10°	3772.7	3589.4	3379.2	3012.6	2839.2	2669.9	2466.7	2274.4	2217.6	2149.9	2155.8
12.5°	4021.8	3859.4	3401.1	3027.5	2792.4	2500.5	2120.0	1909.8	1708.5	1704.5	1653.7
15°	4099.5	3979.9	3447.9	2941.9	2464.7	2046.2	1652.7	1424.6	1279.2	1250.3	1207.4
17.5°	4295.7	4108.4	3305.5	2664.9	2084.1	1599.9	1242.3	1082.9	1070.9	1090.9	1068.9
20°	4308.7	4004.8	3048.4	2255.5	1674.7	1212.4	1013.2	933.5	976.3	1025.1	1023.1
22.5°	4297.7	3874.3	2826.3	1906.8	1258.2	974.3	887.6	869.7	909.6	982.3	991.2
25°	4186.1	3831.5	2548.3	1566.1	1021.1	834.8	810.9	821.9	871.7	957.4	957.4
27.5°	4302.7	3657.1	2199.7	1274.2	858.7	743.2	760.1	788.0	824.9	922.5	940.4
30°	4264.8	3714.9	1918.7	1026.1	757.1	679.4	717.3	745.2	787.0	888.6	897.6
32.5°	4366.5	3560.5	1682.6	862.7	690.4	654.5	663.5	701.3	756.1	835.8	851.8
35°	4521.9	3617.3	1411.7	776.1	657.5	625.6	642.6	672.5	727.2	805.0	817.9
37.5°	5018.0	3614.3	1224.4	728.2	651.5	619.7	627.6	648.5	712.3	783.0	812.9
40°	5336.8	3821.5	1054.0	717.3	644.6	616.7	609.7	632.6	683.4	767.1	788.0
42.5°	5935.5	3948.0	980.3	713.3	643.6	599.7	592.8	619.7	669.5	747.2	779.0
45°	6568.1	4128.4	921.5	711.3	640.6	596.7	575.8	609.7	651.5	726.2	763.1
47.5°	7312.3	4509.9	888.6	704.3	634.6	600.7	569.8	586.8	633.6	708.3	745.2
50°	8286.6	5015.0	895.6	694.4	643.6	601.7	560.9	568.8	611.7	684.4	722.3
52.5°	9471.1	5797.0	940.4	698.4	649.5	596.7	556.9	552.9	589.8	653.5	691.4
55°	10898.7	6906.8	1074.9	717.3	649.5	595.7	550.9	533.0	560.9	612.7	649.5
57.5°	12621.2	8192.0	1337.9	726.2	644.6	589.8	538.0	506.1	523.0	565.9	600.7
60°	14100.6	9229.0	1608.9	732.2	654.5	575.8	512.1	472.2	483.2	516.0	546.9
62.5°	14854.7	9519.9	1690.6	727.2	681.4	566.9	481.2	436.3	437.3	465.2	493.1
65°	14996.2	9132.4	1362.8	722.3	716.3	565.9	459.3	405.5	398.5	418.4	442.3
67.5°	13988.0	7927.0	983.3	711.3	720.3	559.9	444.3	380.6	362.6	376.6	396.5
70°	11877.0	6383.8	825.9	689.4	672.5	530.0	418.4	354.7	330.7	340.7	355.7
72.5°	8854.5	4723.1	720.3	642.6	585.8	453.3	378.6	325.8	300.9	307.8	318.8
75°	4919.4	2519.5	602.7	558.9	478.2	366.6	322.8	288.9	267.0	270.0	281.9
77.5°	1633.8	929.5	442.3	443.3	361.6	282.9	266.0	247.1	230.1	231.1	241.1
80°	740.2	514.1	316.8	318.8	252.0	205.2	204.2	198.2	187.3	184.3	191.3
82.5°	429.4	311.8	217.2	207.2	162.4	133.5	148.4	145.4	142.5	131.5	133.5
85°	211.2	167.4	113.6	107.6	89.7	66.7	79.7	82.7	79.7	67.7	66.7
87.5°	51.8	54.8	27.9	25.9	14.9	7.0	12.0	12.0	14.9	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)