

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: P367103

Luminaire Tested: **MSA-SA1D-760-U-T4W-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367103
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-15)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1D-760-U-T4W-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5170 lumens
Efficiency: N/A
Efficacy: 77.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

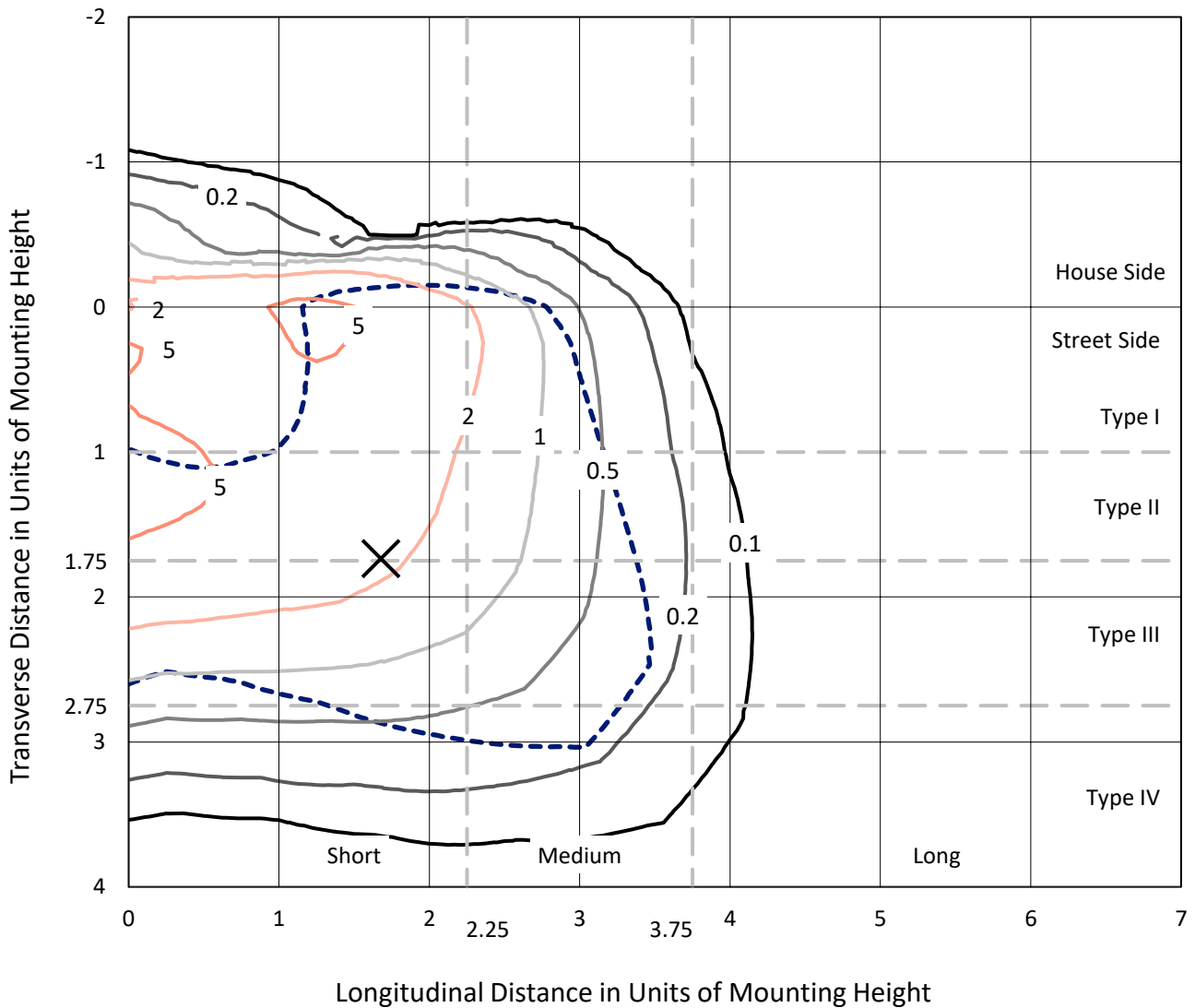
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

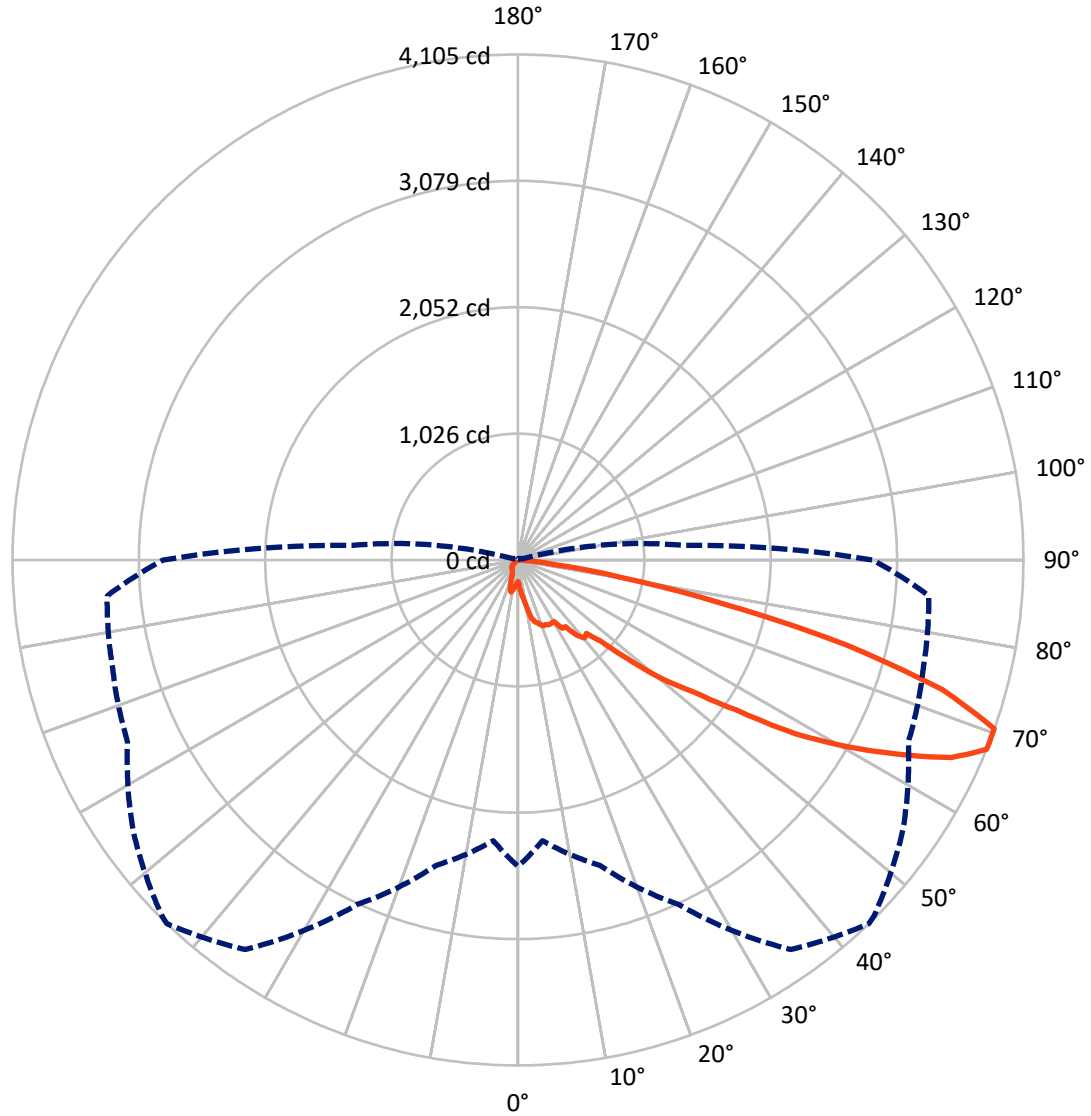
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.5 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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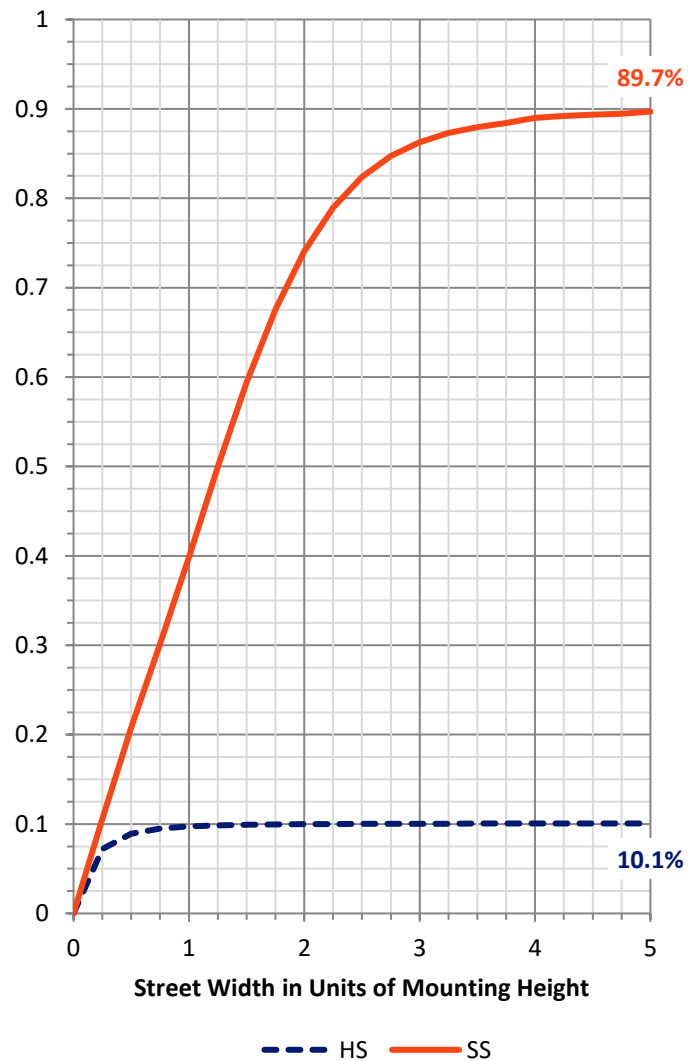
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	525.2	0.0	525.2
	% Fixture	10.2	0.0	10.2
Street Side	Lumens	4644.8	0.0	4644.8
	% Fixture	89.8	0.0	89.8
Total	Lumens	5170.0	0.0	5170.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	25.8	0.5
10°-20°	108.1	2.1
20°-30°	191.5	3.7
30°-40°	311.2	6.0
40°-50°	622.8	12.0
50°-60°	1277.7	24.7
60°-70°	1755.1	33.9
70°-80°	824.9	16.0
80°-90°	52.8	1.0
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°	5170.0	100.0
0°-180°	5170.0	100.0

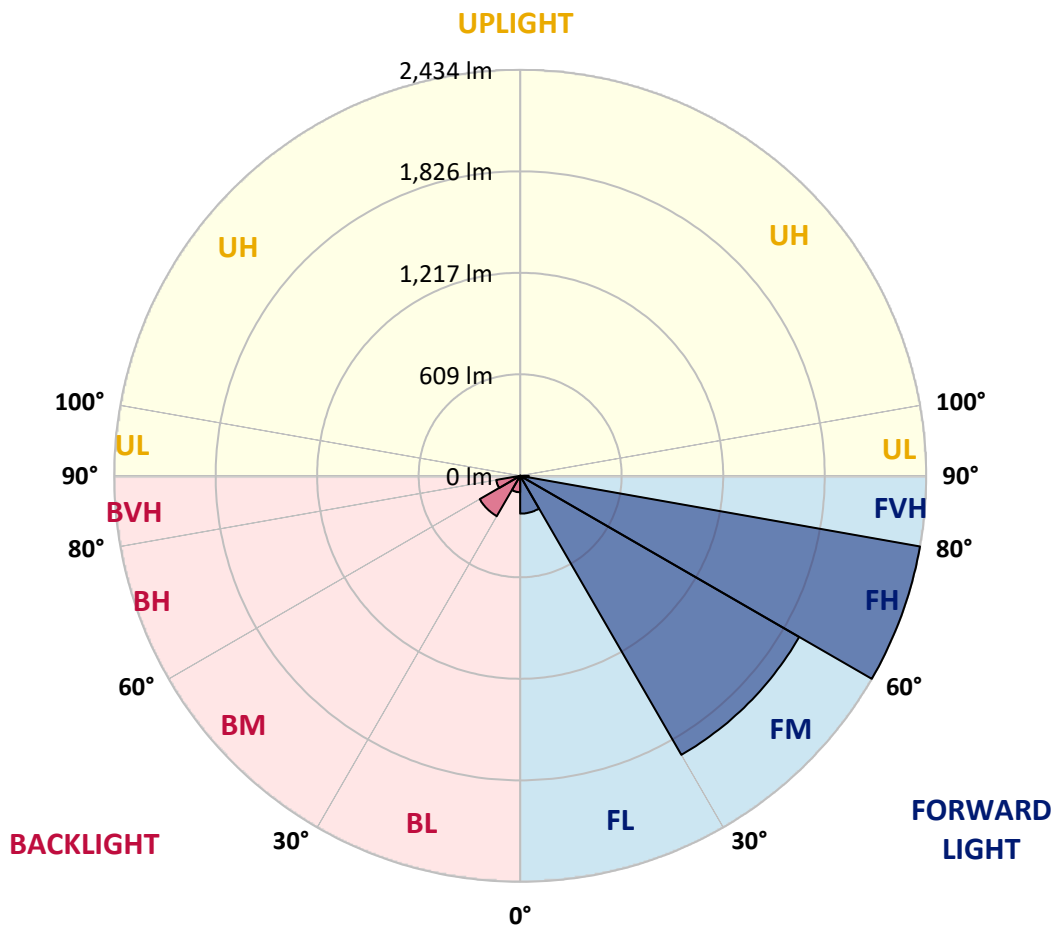


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	226.8	4.4			
FM (30°-60°)	1931.9	37.4			
FH (60°-80°)	2434.4	47.1			G2/5000
FVH (80°-90°)	51.8	1.0			G1/100
BL (0°-30°)	98.6	1.9	B0/110		
BM (30°-60°)	279.7	5.4	B1/1000		
BH (60°-80°)	145.7	2.8	B1/500		G1/500
BVH (80°-90°)	1.1	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-G2
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	174.2	174.2	174.2	174.2	174.2	174.2	174.2	174.2	174.2	174.2	174.2
2.5°	221.5	214.4	204.1	206.4	207.5	210.7	211.0	207.0	195.6	192.4	206.4
5°	310.5	293.1	289.9	283.4	270.3	263.1	261.4	268.6	259.4	256.6	260.3
7.5°	396.6	381.7	365.5	356.6	329.3	312.5	311.6	314.4	316.2	306.2	311.3
10°	453.9	437.6	434.2	413.4	389.7	385.7	384.0	373.2	364.3	356.9	332.1
12.5°	505.7	505.5	511.7	481.8	478.1	482.1	480.7	441.9	433.0	402.0	394.8
15°	574.7	591.8	564.8	539.7	507.7	521.4	517.7	492.9	486.9	465.8	435.3
17.5°	646.3	650.9	605.5	567.0	558.8	540.8	544.5	535.7	505.5	522.3	492.1
20°	648.0	658.0	609.5	545.9	571.3	570.5	570.7	562.2	522.3	561.6	534.0
22.5°	671.9	647.4	602.4	561.9	566.5	570.7	575.3	564.8	556.2	565.9	571.0
25°	662.3	652.6	609.2	582.4	578.2	581.6	582.7	596.1	590.7	614.1	601.2
27.5°	687.3	673.4	595.8	600.7	585.6	581.6	574.7	619.5	635.5	616.9	651.1
30°	730.4	728.4	618.9	626.0	614.4	579.3	597.5	656.0	675.9	664.5	706.2
32.5°	797.7	804.5	686.5	640.3	646.3	662.0	655.1	656.0	706.4	731.8	764.9
35°	893.2	889.5	752.3	694.5	663.1	665.7	675.4	721.8	787.1	785.4	820.5
37.5°	1080.8	1040.3	868.9	749.8	759.2	772.0	764.9	827.3	833.6	835.9	919.7
40°	1357.3	1303.4	1052.8	866.4	775.7	832.5	829.0	844.4	886.3	902.0	1024.3
42.5°	1721.6	1649.2	1376.4	1080.8	855.5	816.5	837.6	866.7	1007.5	1052.3	1186.2
45°	2124.2	1977.6	1699.1	1386.4	1055.7	934.5	950.5	1004.6	1199.9	1274.0	1422.0
47.5°	2385.0	2256.2	2018.7	1657.2	1264.4	1200.8	1202.2	1213.9	1426.0	1563.4	1761.8
50°	2611.7	2474.5	2254.2	1940.3	1633.5	1513.2	1485.9	1432.0	1713.9	1901.8	2121.9
52.5°	2931.5	2771.3	2489.7	2272.4	2054.6	1771.2	1761.5	1779.8	2053.5	2251.0	2491.1
55°	3220.0	3025.3	2756.5	2619.7	2534.7	2150.4	2158.7	2189.2	2489.4	2594.0	2819.5
57.5°	3347.5	3136.5	2998.2	2936.7	2891.3	2668.4	2640.5	2622.2	2833.2	2873.1	3163.6
60°	3431.0	3230.3	3167.6	3181.8	3319.3	3082.6	3057.3	2951.2	3117.7	3150.5	3472.1
62.5°	3378.3	3195.2	3208.6	3327.5	3632.6	3476.9	3403.6	3226.3	3350.3	3376.8	3693.6
65°	3046.1	2855.4	3027.6	3315.3	3871.5	3867.8	3833.8	3480.3	3479.2	3513.1	3710.7
67.5°	2488.2	2288.1	2566.6	3085.5	3861.5	4104.7	4088.7	3817.3	3497.7	3407.1	3348.6
70°	1729.9	1556.3	1872.2	2548.1	3517.4	4103.0	4077.3	4043.7	3351.2	2932.7	2596.3
72.5°	898.9	803.4	1097.6	1755.8	2803.8	3604.9	3689.6	3634.3	2861.4	2130.7	1528.9
75°	305.3	274.0	452.7	931.9	1863.9	2752.8	2852.0	2795.8	1943.4	1143.2	604.7
77.5°	118.3	110.0	162.2	378.3	935.1	1677.4	1785.2	1727.9	1042.3	418.8	142.3
80°	67.3	65.0	89.5	170.5	412.2	834.4	910.3	825.6	375.7	141.1	37.1
82.5°	28.5	29.4	49.9	92.1	207.3	294.5	328.4	299.6	157.4	96.6	13.7
85°	6.3	7.7	23.7	51.3	87.0	84.1	88.1	97.8	96.6	71.0	6.0
87.5°	0.0	0.0	7.4	14.0	20.8	13.7	10.8	19.1	29.6	28.5	2.6
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°	174.2	174.2	174.2	174.2	174.2	174.2	174.2	174.2	174.2	174.2	174.2
2.5°	209.0	206.1	188.2	187.0	188.2	185.0	184.7	178.2	178.7	193.6	194.7
5°	260.3	246.0	230.6	225.8	221.2	211.0	216.7	216.7	216.7	226.1	228.9
7.5°	306.8	287.7	266.0	247.7	230.1	217.2	226.1	232.3	236.1	248.3	254.0
10°	327.8	309.0	289.6	263.7	250.0	245.2	234.9	229.5	236.1	233.5	236.6
12.5°	372.9	355.8	322.4	295.6	285.4	268.8	238.6	217.5	203.6	201.3	200.7
15°	416.8	406.2	361.5	325.6	289.9	251.7	200.1	172.2	157.4	154.8	155.1
17.5°	472.4	457.3	391.4	339.8	279.4	210.7	154.5	130.6	129.4	135.7	136.3
20°	509.4	484.6	406.5	328.1	244.6	159.4	120.9	115.2	124.3	135.7	134.6
22.5°	544.8	518.0	426.5	317.9	189.6	120.9	111.2	111.8	119.5	131.7	134.8
25°	568.2	558.5	451.0	293.9	144.5	104.6	106.3	110.6	117.2	128.9	128.9
27.5°	638.6	593.3	448.2	247.5	111.2	97.5	101.5	106.9	110.3	124.3	125.7
30°	681.4	666.5	463.0	200.1	97.5	88.4	96.1	100.9	103.2	119.2	119.7
32.5°	733.8	701.0	480.9	147.7	90.7	87.8	86.1	89.8	96.4	110.3	111.2
35°	797.7	788.0	455.3	116.0	88.4	82.1	78.7	80.7	85.0	94.4	96.4
37.5°	928.0	870.4	439.9	99.5	88.4	80.1	76.4	71.3	71.8	78.4	82.1
40°	1037.7	1020.0	396.8	96.6	84.4	77.3	68.1	61.9	57.6	59.6	61.0
42.5°	1239.3	1157.4	341.2	95.2	80.7	69.8	57.9	51.3	44.8	45.3	47.6
45°	1483.9	1307.4	291.6	93.8	78.1	62.4	48.7	41.1	34.2	34.5	36.8
47.5°	1810.6	1526.1	231.5	89.5	73.6	55.6	39.3	31.4	27.4	28.2	30.2
50°	2181.8	1717.9	183.0	83.0	68.1	49.0	31.9	25.4	23.9	24.8	27.1
52.5°	2513.3	1859.3	151.1	77.0	60.4	39.9	26.8	22.5	22.0	22.5	24.2
55°	2808.1	1941.4	126.3	70.1	51.9	32.2	24.2	20.8	20.5	20.2	21.4
57.5°	3084.6	1965.1	98.6	59.3	42.2	27.9	22.5	19.4	18.8	18.0	18.8
60°	3286.2	1924.6	72.4	47.6	34.5	25.4	21.1	17.4	16.5	15.1	15.7
62.5°	3383.4	1813.7	54.7	38.2	29.4	23.1	18.8	15.1	14.0	12.3	12.5
65°	3291.0	1631.0	43.0	32.2	25.1	19.4	16.0	12.8	11.4	9.7	9.7
67.5°	2881.9	1353.0	36.5	27.9	21.1	16.5	13.1	11.7	9.4	8.0	7.7
70°	2115.3	973.3	31.4	24.5	18.2	14.3	11.1	10.5	9.1	7.7	7.1
72.5°	1193.9	550.8	26.8	21.7	15.4	12.0	9.4	9.7	8.8	7.1	6.6
75°	455.6	185.6	22.2	18.0	12.5	9.1	8.0	8.0	8.0	6.0	5.1
77.5°	112.9	47.3	17.7	14.5	10.0	6.0	6.6	6.8	6.8	5.1	3.7
80°	31.1	16.0	10.5	10.5	7.1	3.4	4.6	4.6	3.7	1.7	0.0
82.5°	11.4	6.0	3.7	4.6	3.1	1.1	1.7	1.1	0.9	0.0	0.0
85°	4.8	3.1	2.3	2.6	1.4	0.0	0.3	0.6	0.0	0.0	0.0
87.5°	2.0	1.4	1.1	1.1	0.6	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)