

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: P366736

Luminaire Tested: **MSA-SA1B-727-U-SL2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366736
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-16)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1B-727-U-SL2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4207 lumens
Efficiency: N/A
Efficacy: 95.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B1 - U0 - G1

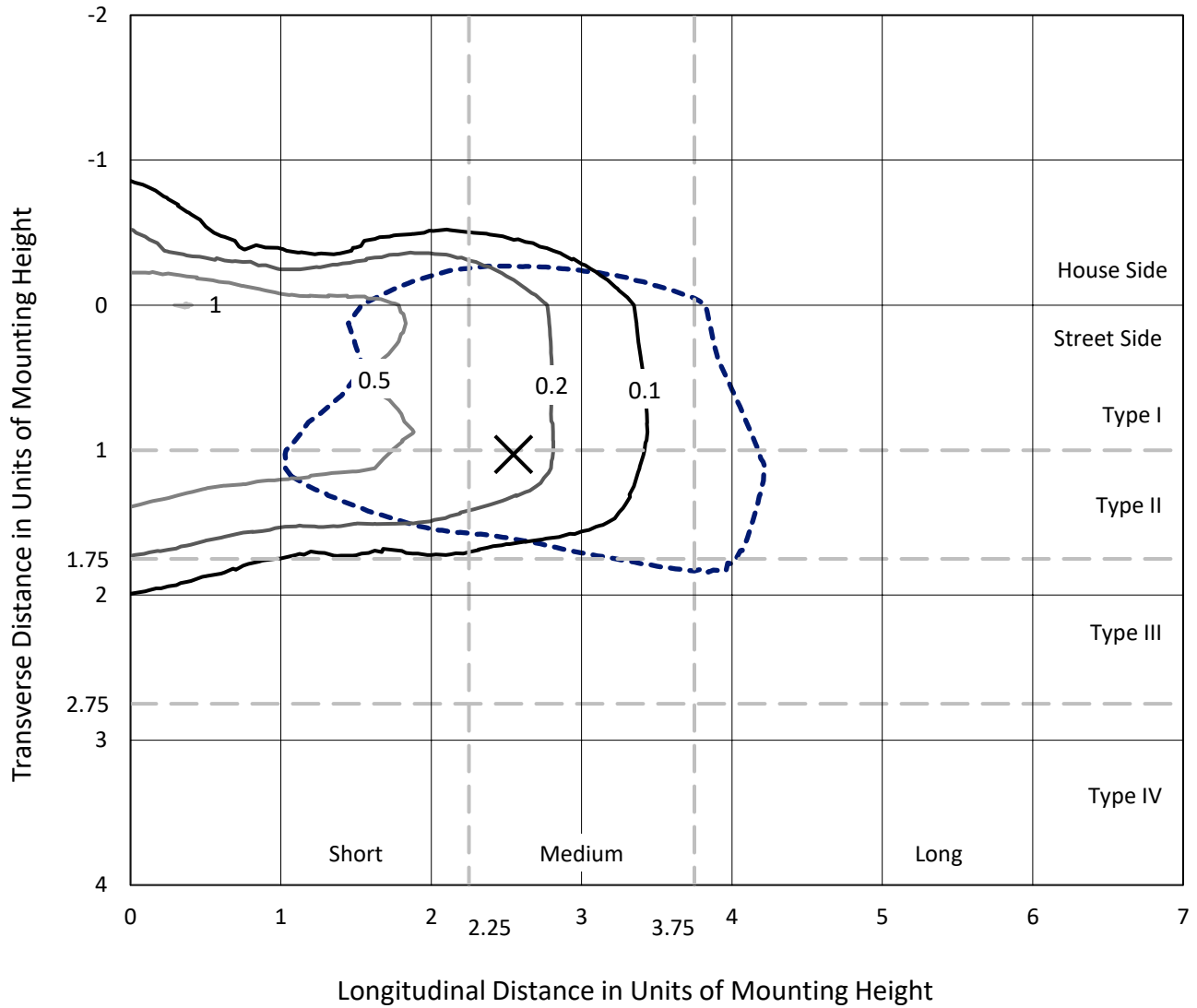
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

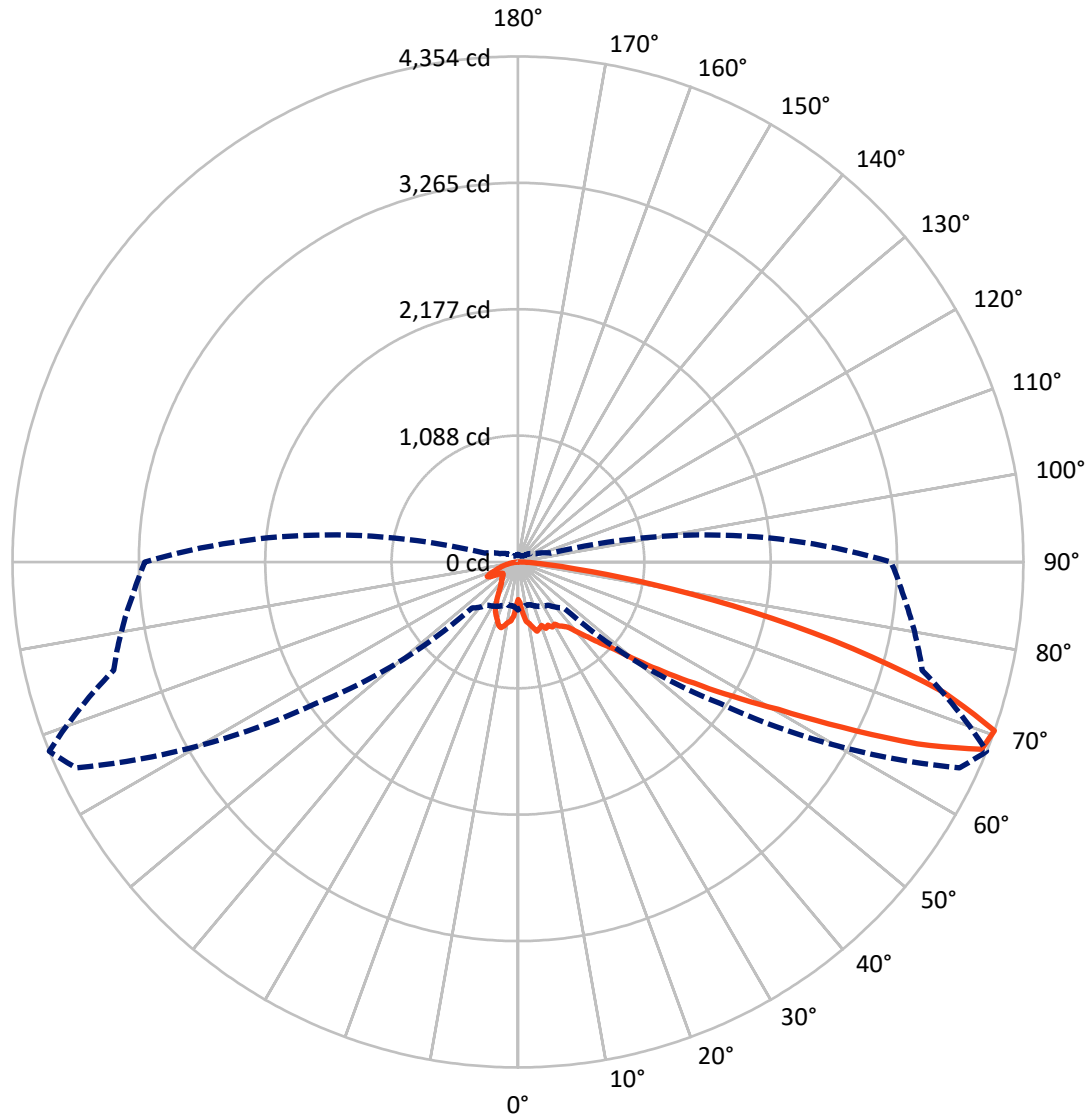
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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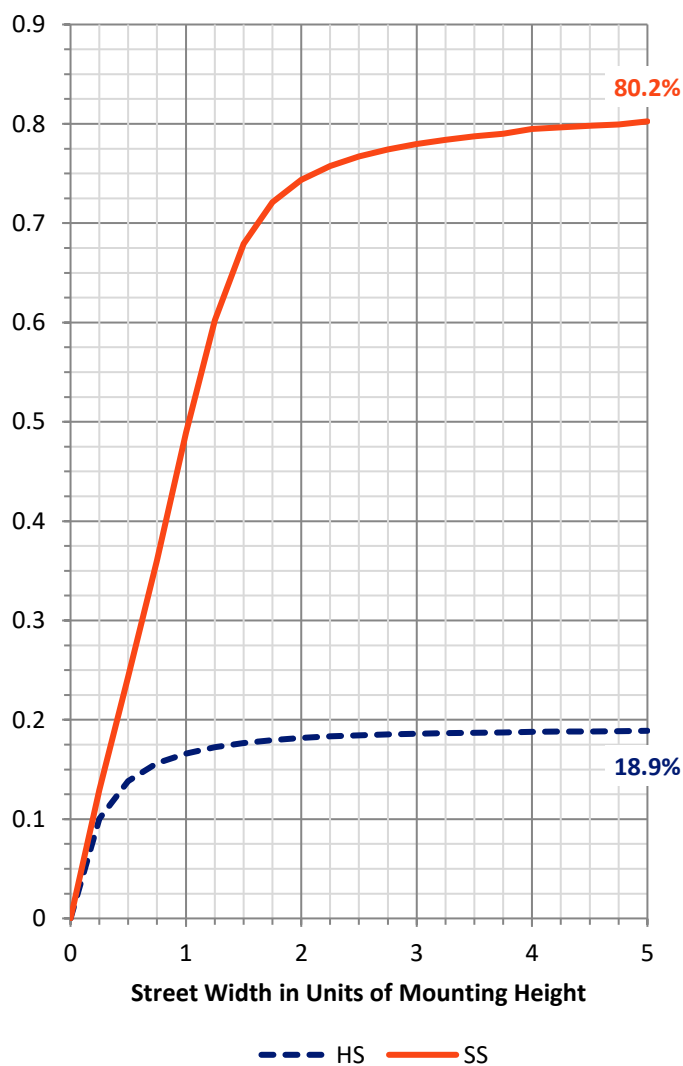
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	803.2	0.0	803.2
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	3403.8	0.0	3403.8
	% Fixture	80.9	0.0	80.9
Total	Lumens	4207.0	0.0	4207.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.1	1.0
10°-20°	140.4	3.3
20°-30°	213.6	5.1
30°-40°	326.3	7.8
40°-50°	561.0	13.3
50°-60°	928.5	22.1
60°-70°	1144.7	27.2
70°-80°	735.4	17.5
80°-90°	114.1	2.7
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°	4207.0	100.0
0°-180°	4207.0	100.0

Coefficient of Utilization



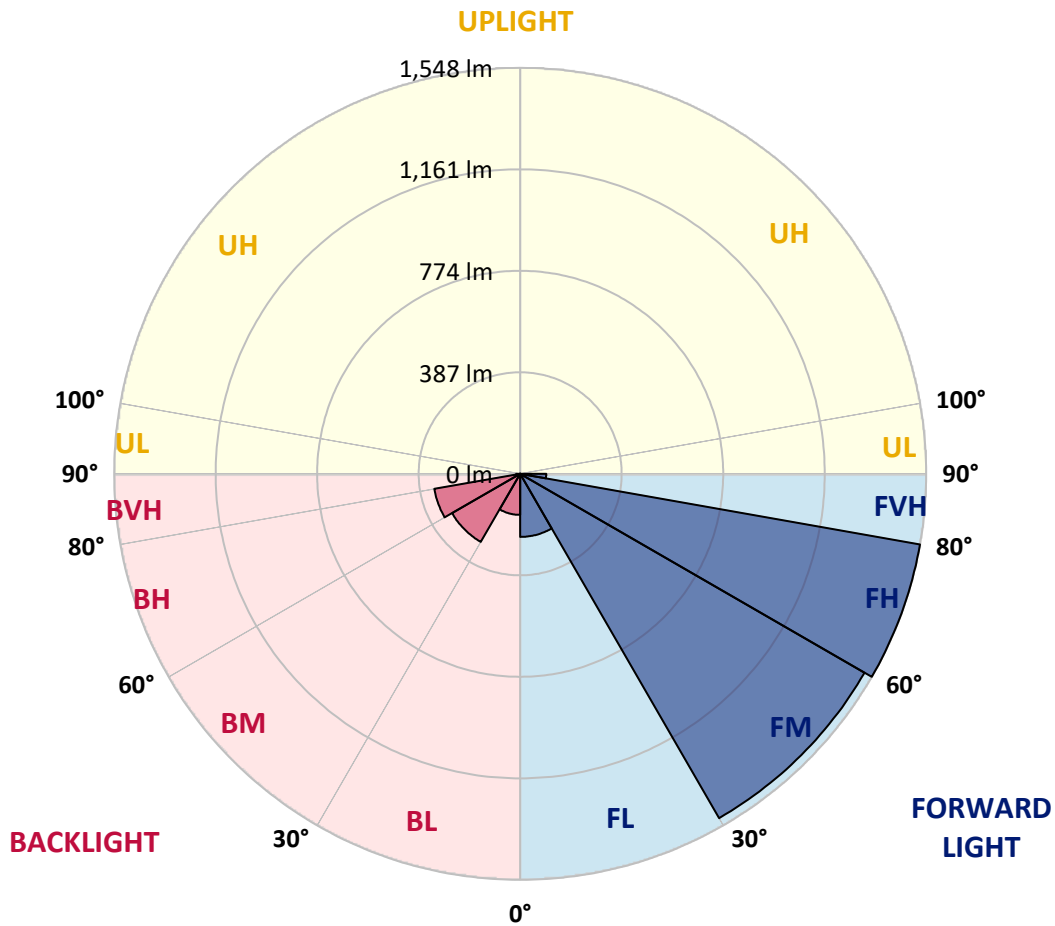
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	240.6	5.7			
FM (30°-60°)	1516.0	36.0			
FH (60°-80°)	1547.8	36.8			G1/1800
FVH (80°-90°)	99.4	2.4			G1/100
BL (0°-30°)	156.5	3.7	B1/500		
BM (30°-60°)	299.8	7.1	B1/1000		
BH (60°-80°)	332.3	7.9	B1/500		G1/500
BVH (80°-90°)	14.6	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	322.6	322.6	322.6	322.6	322.6	322.6	322.6	322.6	322.6	322.6	322.6
2.5°	370.6	355.7	340.5	347.9	359.7	370.1	368.0	369.2	355.0	353.0	390.5
5°	436.7	411.0	410.4	410.8	411.8	399.9	429.1	444.2	447.6	463.1	499.9
7.5°	459.6	449.2	438.6	443.9	430.5	431.7	467.6	507.1	516.4	527.7	578.0
10°	454.8	444.9	448.1	449.0	451.5	471.3	494.4	532.3	540.2	576.1	589.1
12.5°	455.5	453.7	468.5	469.1	495.5	531.2	540.4	575.2	578.4	604.8	659.2
15°	479.6	491.8	483.5	487.9	493.0	535.8	549.0	599.0	618.0	652.0	692.8
17.5°	526.6	530.2	505.3	498.8	515.5	528.6	558.7	580.3	600.2	695.1	751.5
20°	537.6	547.1	517.5	483.8	519.2	537.4	558.3	568.2	583.7	701.5	781.4
22.5°	584.4	564.7	528.9	499.7	511.3	528.9	544.1	581.2	621.9	683.3	811.3
25°	611.0	599.5	567.7	536.3	526.5	527.0	556.2	589.5	603.6	709.9	817.3
27.5°	675.2	656.9	585.3	579.3	542.1	513.3	558.2	609.9	634.6	689.1	846.6
30°	755.7	741.8	647.8	639.8	583.2	532.8	582.8	625.1	621.5	702.7	866.8
32.5°	820.9	844.1	749.2	686.7	646.4	598.1	575.1	622.4	657.5	734.2	901.1
35°	913.8	935.7	828.2	786.0	698.5	628.4	629.1	658.7	680.3	771.0	939.5
37.5°	1074.7	1055.6	969.1	902.4	846.4	741.8	710.5	700.1	717.5	816.1	1014.7
40°	1190.8	1174.6	1072.8	1034.8	925.8	865.0	779.1	769.3	800.1	862.6	1076.2
42.5°	1328.3	1299.4	1204.7	1173.3	1059.4	949.9	863.3	868.9	883.9	950.3	1159.3
45°	1468.3	1398.2	1344.5	1342.0	1266.0	1114.7	998.3	993.8	994.3	1079.3	1252.6
47.5°	1579.4	1516.3	1454.9	1425.7	1387.3	1399.8	1194.5	1140.8	1124.6	1209.3	1392.6
50°	1654.6	1582.0	1512.5	1505.6	1608.1	1675.5	1378.7	1321.3	1331.3	1395.2	1579.2
52.5°	1656.1	1570.0	1497.5	1545.6	1787.0	1883.5	1695.9	1535.5	1567.6	1611.1	1822.7
55°	1541.0	1451.7	1404.5	1514.1	1856.9	2130.1	2141.8	1878.9	1841.9	1857.9	2113.8
57.5°	1298.2	1208.0	1180.6	1311.7	1724.3	2368.0	2680.2	2289.1	2180.7	2113.8	2412.0
60°	977.2	899.2	882.1	965.8	1429.5	2298.1	3116.1	2799.7	2578.8	2399.5	2711.2
62.5°	732.8	676.8	651.1	663.1	989.2	2070.8	3402.4	3444.9	3132.0	2711.5	3003.5
65°	595.5	550.2	527.3	511.8	615.2	1601.2	3350.7	3987.9	3778.2	3039.2	3230.9
67.5°	497.4	457.3	446.7	461.8	486.3	929.0	2945.7	4291.6	4305.9	3362.5	3363.9
70°	412.9	383.1	379.3	422.2	454.4	560.6	2127.7	4196.2	4353.6	3604.9	3332.7
72.5°	319.0	303.0	302.5	369.9	451.5	477.9	1267.0	3625.0	3836.5	3527.4	3027.7
75°	221.3	210.2	218.7	304.1	441.1	484.7	723.1	2823.5	2981.8	3001.7	2425.4
77.5°	152.3	143.0	152.1	219.9	393.9	496.3	505.9	2041.6	2059.2	2012.9	1389.2
80°	106.0	99.5	106.5	155.6	306.5	491.2	430.7	1285.3	1179.3	898.3	444.8
82.5°	65.7	63.7	71.5	110.9	215.9	446.9	408.1	663.3	506.4	247.9	158.8
85°	34.5	31.7	41.6	72.4	135.0	350.7	382.4	302.7	195.4	88.0	63.7
87.5°	10.2	9.2	16.0	29.2	57.2	157.2	218.9	128.4	72.9	25.9	19.9
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°	322.6	322.6	322.6	322.6	322.6	322.6	322.6	322.6	322.6	322.6	322.6
2.5°	393.2	391.2	365.2	368.5	374.2	375.6	375.4	365.9	355.8	383.8	383.0
5°	500.8	483.3	470.3	467.5	451.5	435.4	441.1	439.1	436.7	449.3	450.9
7.5°	578.2	554.1	539.0	500.0	463.1	431.0	441.2	444.4	438.1	461.0	467.8
10°	598.6	579.6	563.3	513.3	492.8	474.2	446.5	415.0	410.8	397.6	399.2
12.5°	651.3	648.7	592.8	548.8	522.2	485.1	425.4	387.2	354.4	356.0	346.5
15°	692.8	694.3	627.2	565.5	494.2	437.5	367.3	319.7	286.1	279.4	272.6
17.5°	748.7	745.8	630.0	545.5	455.1	372.0	285.9	238.8	233.1	237.0	231.0
20°	773.0	748.1	612.0	495.6	394.1	282.6	216.0	191.0	202.0	217.5	217.8
22.5°	794.8	752.4	602.7	455.5	312.7	205.5	173.4	168.9	181.7	202.7	204.4
25°	793.9	771.9	586.0	415.0	242.5	160.4	150.7	154.1	169.4	191.2	192.4
27.5°	833.9	756.9	542.5	361.8	182.6	137.3	139.8	146.0	153.2	174.0	178.0
30°	833.5	784.8	520.6	297.2	146.7	125.9	132.2	137.5	143.5	162.5	164.8
32.5°	853.2	766.6	507.4	231.2	131.5	123.1	124.7	129.9	138.6	151.4	153.0
35°	877.0	787.2	465.2	183.6	125.9	120.6	121.8	124.8	132.8	144.6	146.1
37.5°	953.3	791.1	448.5	154.8	125.5	119.6	119.4	121.0	129.9	140.7	145.4
40°	983.0	826.5	399.7	144.6	124.3	119.6	117.1	118.0	125.4	139.1	142.8
42.5°	1054.3	838.3	363.6	141.0	124.3	117.4	113.6	115.0	123.6	135.8	141.6
45°	1127.7	855.0	320.6	140.3	124.1	117.3	109.9	113.0	120.1	130.3	136.6
47.5°	1232.3	915.2	277.7	138.2	122.7	118.1	109.0	108.8	115.0	123.8	129.8
50°	1402.9	1009.2	244.4	135.6	122.9	117.4	107.2	104.8	108.8	116.6	122.4
52.5°	1640.5	1169.5	231.4	134.2	121.5	114.6	104.2	100.4	102.7	108.8	114.4
55°	1916.2	1385.9	244.2	134.2	118.7	110.2	100.0	95.4	96.7	100.9	106.3
57.5°	2238.4	1654.7	306.4	132.2	115.2	104.9	94.9	89.6	90.0	93.7	98.6
60°	2574.9	1955.1	445.6	130.6	112.7	99.1	88.9	83.5	82.9	86.5	90.9
62.5°	2911.9	2232.3	592.1	134.3	112.0	94.2	82.6	77.1	76.9	80.1	83.8
65°	3179.9	2421.7	628.6	149.3	116.6	88.6	76.1	71.0	70.6	73.2	77.3
67.5°	3311.4	2449.2	477.5	168.0	126.2	83.3	69.7	65.0	64.6	67.4	71.0
70°	3214.0	2261.5	294.7	169.9	125.7	77.1	63.2	59.2	58.5	61.4	64.1
72.5°	2853.8	1978.2	224.0	150.4	108.8	68.3	56.7	53.2	52.1	54.8	57.2
75°	2290.5	1570.6	179.4	121.3	85.7	57.6	50.2	46.8	45.6	48.1	50.2
77.5°	1334.3	883.5	131.2	94.7	64.8	47.0	42.8	39.8	38.4	41.0	42.6
80°	433.8	294.4	82.4	68.0	47.4	36.8	34.7	32.6	31.2	32.9	33.5
82.5°	155.8	109.5	45.6	41.7	31.5	26.4	26.2	25.0	23.2	23.9	23.9
85°	69.0	50.0	27.1	22.4	18.8	14.1	16.6	15.7	13.9	13.6	13.0
87.5°	19.4	16.6	9.9	7.6	6.2	2.3	5.3	4.8	3.9	3.5	2.5
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)