

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: P366782

Luminaire Tested: **MSA-SA1B-740-U-SL3**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366782  
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-SA1B-740-U-SL3  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

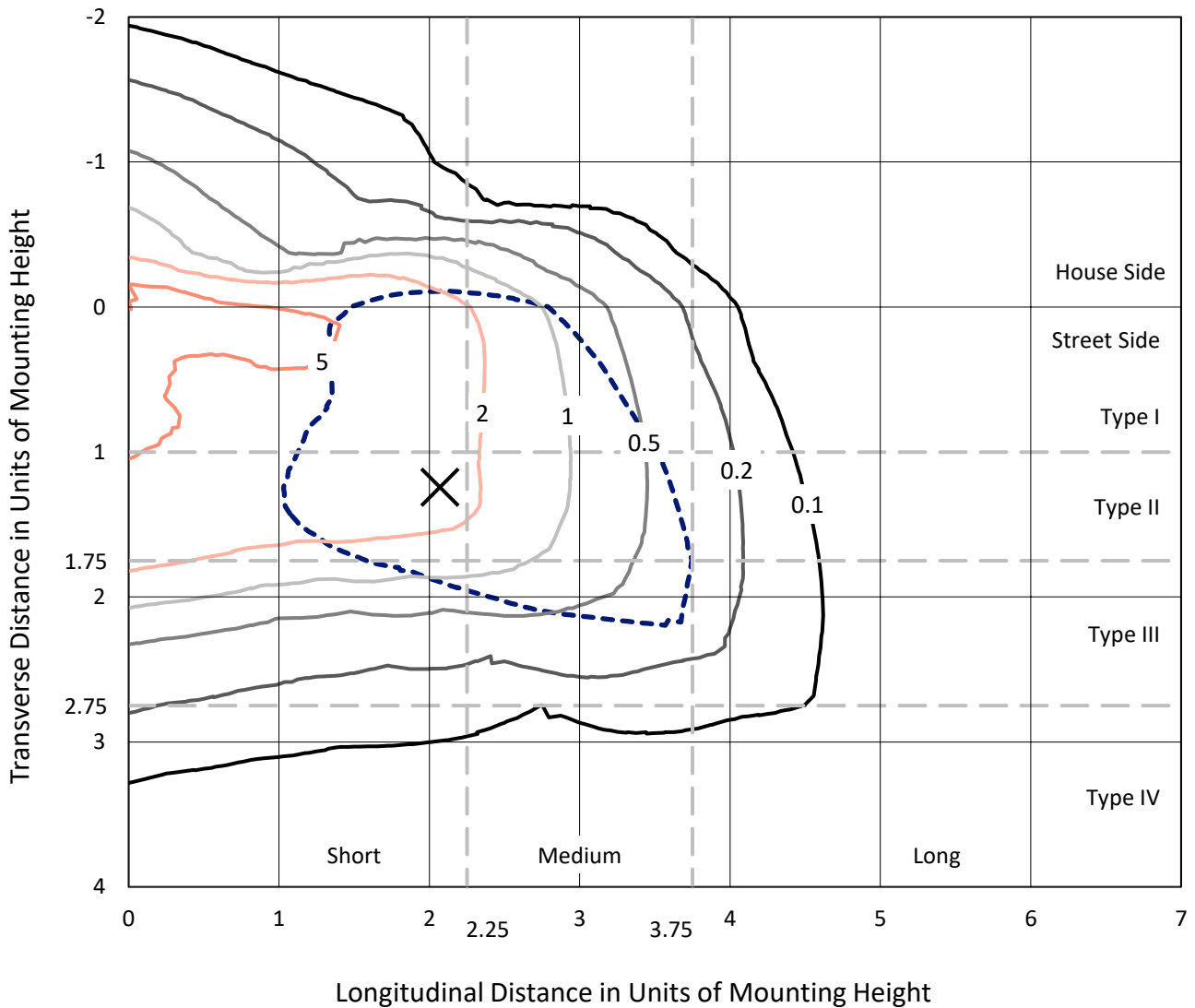
Lumens per Lamp: N/A  
Luminaire Lumens: 4969 lumens  
Efficiency: N/A  
Efficacy: 112.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
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: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

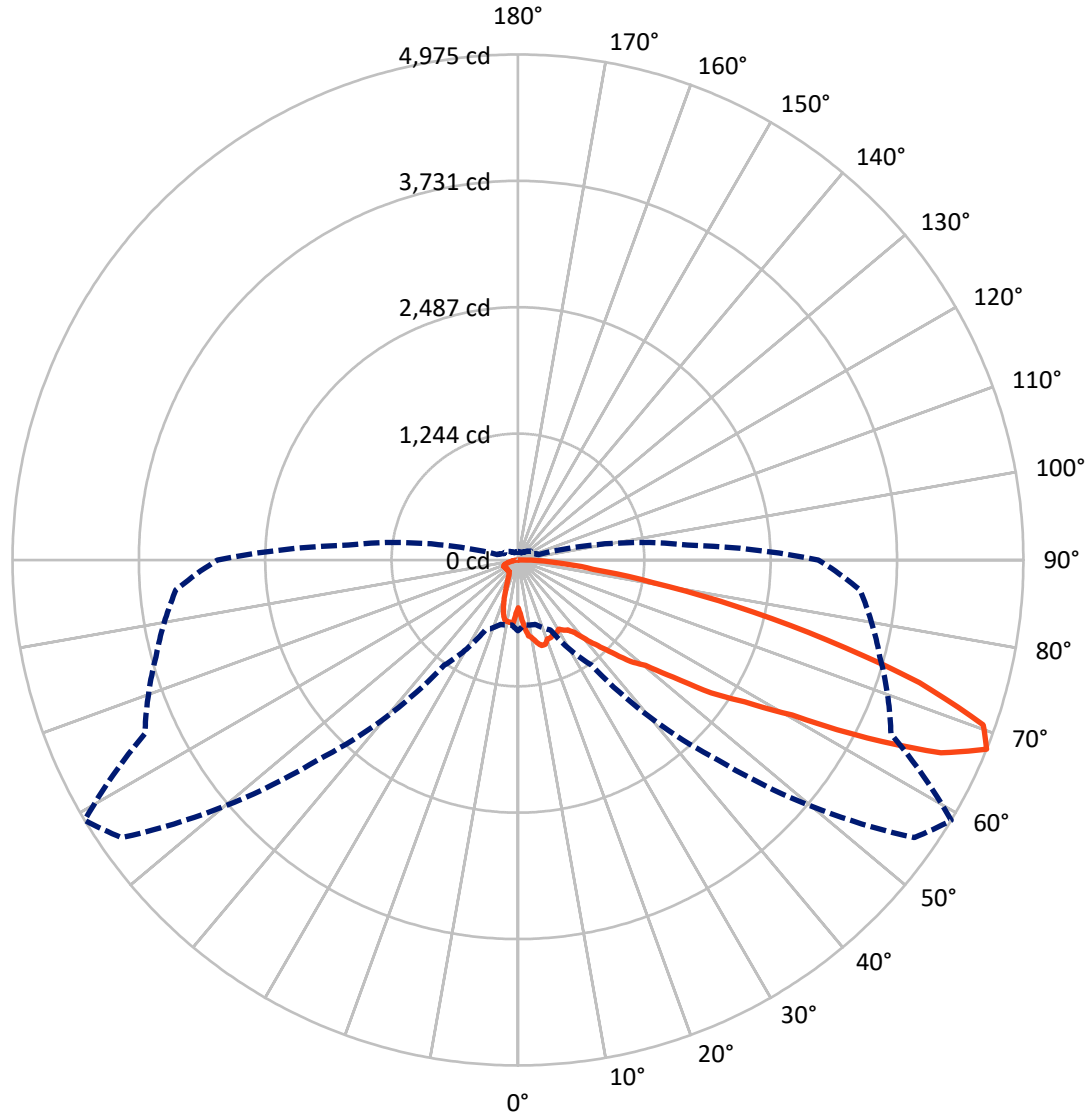
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8 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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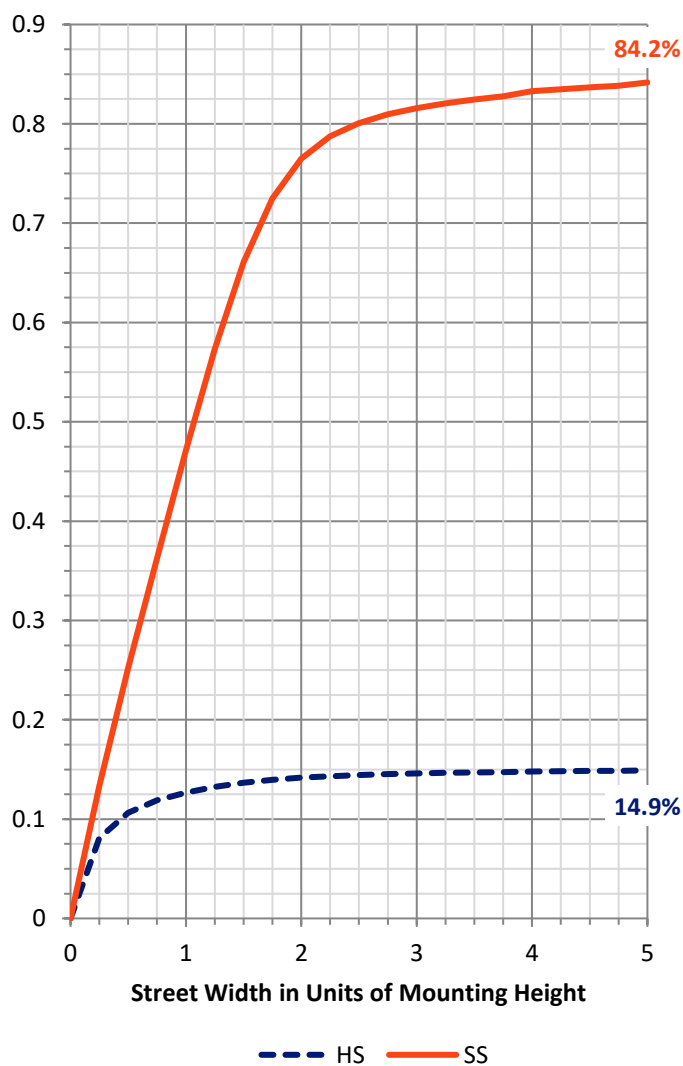
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	747.9	0.0	747.9
	% Fixture	15.1	0.0	15.1
<b>Street Side</b>	Lumens	4221.1	0.0	4221.1
	% Fixture	84.9	0.0	84.9
<b>Total</b>	Lumens	4969.0	0.0	4969.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	61.4	1.2
10°-20°	181.7	3.7
20°-30°	259.5	5.2
30°-40°	382.4	7.7
40°-50°	646.1	13.0
50°-60°	1124.4	22.6
60°-70°	1432.8	28.8
70°-80°	758.7	15.3
80°-90°	122.0	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°	4969.0	100.0
0°-180°	4969.0	100.0

**Coefficient of Utilization**



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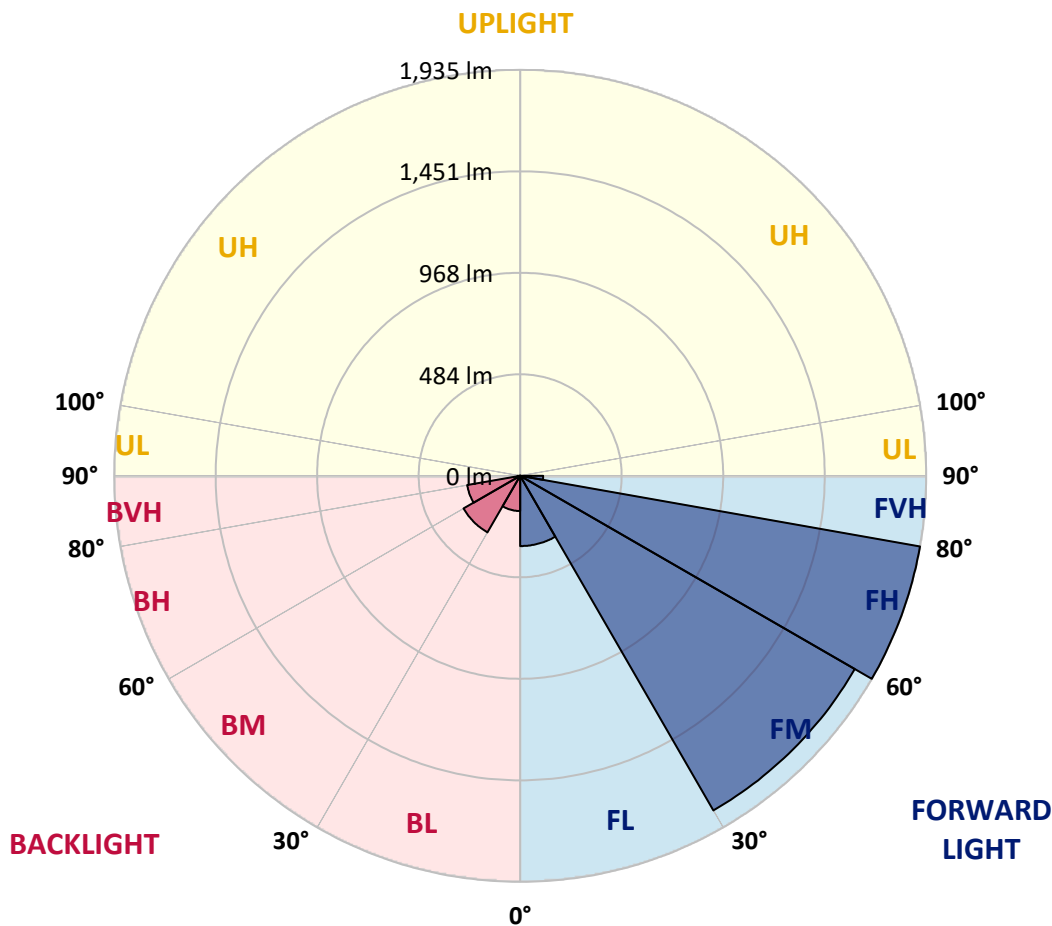
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	334.9	6.7			
FM (30°-60°)	1841.4	37.1			
FH (60°-80°)	1935.1	38.9			G2/5000
FVH (80°-90°)	109.6	2.2			G2/225
BL (0°-30°)	167.7	3.4	B1/500		
BM (30°-60°)	311.4	6.3	B1/1000		
BH (60°-80°)	256.3	5.2	B1/500		G1/500
BVH (80°-90°)	12.4	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-G2**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	470.2	470.2	470.2	470.2	470.2	470.2	470.2	470.2	470.2	470.2	470.2
2.5°	587.1	559.7	530.6	538.8	555.5	563.1	554.8	546.8	536.5	524.3	566.0
5°	711.9	671.3	665.4	665.2	659.3	635.7	666.0	663.9	676.1	688.8	721.2
7.5°	747.5	732.4	715.9	723.7	694.0	692.8	739.9	753.4	777.0	769.2	812.8
10°	729.2	712.1	720.8	717.6	720.4	751.5	780.4	781.2	806.5	831.3	803.3
12.5°	697.0	698.2	732.6	731.3	775.5	833.4	842.1	835.3	876.6	859.7	883.8
15°	719.9	735.3	726.7	734.0	751.5	825.2	849.2	873.6	912.8	928.0	904.0
17.5°	756.6	764.8	726.0	722.0	758.0	793.0	852.6	873.4	879.5	987.6	953.7
20°	741.0	757.6	719.7	671.1	730.9	777.2	836.0	829.6	859.3	992.2	964.0
22.5°	785.2	757.6	709.4	674.9	695.9	738.5	788.4	829.8	865.0	965.0	978.9
25°	793.6	780.6	735.5	701.2	694.0	709.2	780.4	807.5	866.9	1002.1	970.9
27.5°	845.0	825.4	733.6	734.7	699.1	672.3	755.1	812.2	888.4	979.1	990.5
30°	908.8	893.9	778.7	782.9	733.6	684.3	772.4	789.6	900.8	1014.9	1015.1
32.5°	956.6	982.9	867.3	810.1	792.6	755.7	745.8	823.5	886.3	1079.8	1057.3
35°	1042.7	1063.2	935.6	889.6	830.5	789.0	817.8	845.9	946.7	1165.1	1119.8
37.5°	1202.1	1178.5	1062.3	990.1	968.0	908.2	924.2	904.6	1012.4	1260.9	1242.4
40°	1294.4	1273.9	1151.6	1111.6	1024.0	1031.6	1011.6	1025.9	1100.2	1362.8	1356.9
42.5°	1385.3	1358.0	1254.6	1226.8	1139.4	1102.3	1105.9	1152.2	1235.6	1527.5	1507.9
45°	1475.2	1405.1	1359.8	1367.2	1325.1	1249.1	1254.4	1297.9	1383.4	1715.7	1670.6
47.5°	1544.1	1486.2	1450.8	1441.8	1420.9	1522.6	1477.1	1494.8	1532.5	1883.3	1866.3
50°	1674.4	1606.8	1560.7	1547.7	1618.4	1759.9	1667.3	1629.2	1709.4	2100.0	2091.2
52.5°	1883.1	1798.9	1722.0	1721.2	1823.5	1915.3	1980.6	1914.9	1944.4	2321.9	2347.2
55°	2065.3	1967.8	1898.7	1936.8	2082.5	2138.7	2360.5	2309.1	2284.2	2546.0	2618.2
57.5°	2133.3	2019.3	1974.3	2030.5	2245.3	2534.2	2768.5	2633.4	2609.1	2799.5	2950.9
60°	1984.0	1863.5	1866.3	1972.2	2344.3	2824.6	3214.7	3100.0	2958.1	3115.1	3263.0
62.5°	1558.6	1449.8	1520.7	1681.8	2261.3	3106.7	3812.8	3861.2	3356.7	3376.9	3436.0
65°	1059.4	984.0	1048.0	1205.7	1834.0	3260.6	4382.3	4576.5	3719.7	3548.3	3510.8
67.5°	697.2	643.9	656.3	761.2	1262.6	2779.7	4763.3	4974.9	4051.5	3688.9	3379.0
70°	539.9	496.9	491.5	546.4	748.8	1931.1	4537.5	4859.3	4253.7	3557.1	2945.2
72.5°	423.7	391.0	394.0	446.8	579.9	1071.4	3511.2	4132.2	3949.2	3067.8	2262.8
75°	330.4	303.6	318.6	379.0	536.3	665.8	2422.6	3136.2	3053.2	2271.6	1290.6
77.5°	239.8	222.6	243.8	322.8	504.1	571.3	1508.1	2188.0	1956.0	1166.3	442.8
80°	157.3	147.6	165.1	263.2	457.1	549.8	932.0	1340.7	966.5	327.6	167.6
82.5°	92.6	88.4	103.0	178.1	367.4	515.3	621.6	745.0	395.4	138.6	89.1
85°	48.6	45.5	61.1	102.3	253.3	470.4	489.4	446.0	191.0	60.2	42.5
87.5°	16.2	15.8	25.9	39.6	95.8	249.7	261.1	211.8	78.8	17.5	9.3
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°	470.2	470.2	470.2	470.2	470.2	470.2	470.2	470.2	470.2	470.2	470.2
2.5°	571.7	563.3	514.8	521.6	527.9	524.7	522.8	500.9	498.8	530.0	527.5
5°	720.4	685.4	644.1	642.2	615.1	587.3	592.7	583.9	586.4	599.3	600.5
7.5°	798.9	755.3	715.9	651.9	597.6	553.6	560.5	558.4	552.7	581.8	589.6
10°	797.4	758.7	714.2	636.8	600.1	564.3	521.4	480.7	468.7	454.4	455.7
12.5°	850.1	815.7	718.9	639.9	590.2	528.5	448.1	403.7	361.1	360.3	349.5
15°	866.5	841.2	728.8	621.8	520.9	432.5	349.3	301.1	270.4	264.3	255.2
17.5°	908.0	868.4	698.7	563.3	440.5	338.2	262.6	228.9	226.4	230.6	225.9
20°	910.7	846.5	644.3	476.7	354.0	256.3	214.1	197.3	206.4	216.7	216.3
22.5°	908.4	818.9	597.4	403.0	265.9	205.9	187.6	183.8	192.2	207.6	209.5
25°	884.8	809.8	538.6	331.0	215.8	176.5	171.4	173.7	184.2	202.4	202.4
27.5°	909.4	773.0	464.9	269.3	181.5	157.1	160.7	166.6	174.4	195.0	198.8
30°	901.4	785.2	405.6	216.9	160.0	143.6	151.6	157.5	166.3	187.8	189.7
32.5°	922.9	752.6	355.6	182.4	145.9	138.3	140.2	148.2	159.8	176.7	180.0
35°	955.8	764.6	298.4	164.0	139.0	132.2	135.8	142.1	153.7	170.1	172.9
37.5°	1060.6	763.9	258.8	153.9	137.7	131.0	132.7	137.1	150.6	165.5	171.8
40°	1128.0	807.7	222.8	151.6	136.2	130.3	128.9	133.7	144.4	162.1	166.6
42.5°	1254.6	834.5	207.2	150.8	136.0	126.8	125.3	131.0	141.5	157.9	164.7
45°	1388.3	872.6	194.8	150.3	135.4	126.1	121.7	128.9	137.7	153.5	161.3
47.5°	1545.6	953.2	187.8	148.9	134.1	127.0	120.4	124.0	133.9	149.7	157.5
50°	1751.5	1060.0	189.3	146.8	136.0	127.2	118.5	120.2	129.3	144.7	152.7
52.5°	2001.9	1225.3	198.8	147.6	137.3	126.1	117.7	116.9	124.7	138.1	146.1
55°	2303.6	1459.9	227.2	151.6	137.3	125.9	116.4	112.7	118.5	129.5	137.3
57.5°	2667.7	1731.5	282.8	153.5	136.2	124.7	113.7	107.0	110.5	119.6	127.0
60°	2980.4	1950.7	340.1	154.8	138.3	121.7	108.2	99.8	102.1	109.1	115.6
62.5°	3139.8	2012.2	357.3	153.7	144.0	119.8	101.7	92.2	92.4	98.3	104.2
65°	3169.7	1930.3	288.1	152.7	151.4	119.6	97.1	85.7	84.2	88.4	93.5
67.5°	2956.6	1675.5	207.8	150.3	152.2	118.3	93.9	80.4	76.6	79.6	83.8
70°	2510.4	1349.3	174.6	145.7	142.1	112.0	88.4	75.0	69.9	72.0	75.2
72.5°	1871.5	998.3	152.2	135.8	123.8	95.8	80.0	68.9	63.6	65.1	67.4
75°	1039.8	532.5	127.4	118.1	101.1	77.5	68.2	61.1	56.4	57.1	59.6
77.5°	345.3	196.5	93.5	93.7	76.4	59.8	56.2	52.2	48.6	48.9	51.0
80°	156.5	108.7	67.0	67.4	53.3	43.4	43.2	41.9	39.6	39.0	40.4
82.5°	90.8	65.9	45.9	43.8	34.3	28.2	31.4	30.7	30.1	27.8	28.2
85°	44.6	35.4	24.0	22.7	19.0	14.1	16.8	17.5	16.8	14.3	14.1
87.5°	10.9	11.6	5.9	5.5	3.2	1.5	2.5	2.5	3.2	2.1	1.1
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)