

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: P366990

Luminaire Tested: **MSA-SA1C-830-U-T3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366990
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-10)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1C-830-U-T3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4977 lumens
Efficiency: N/A
Efficacy: 84.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G1

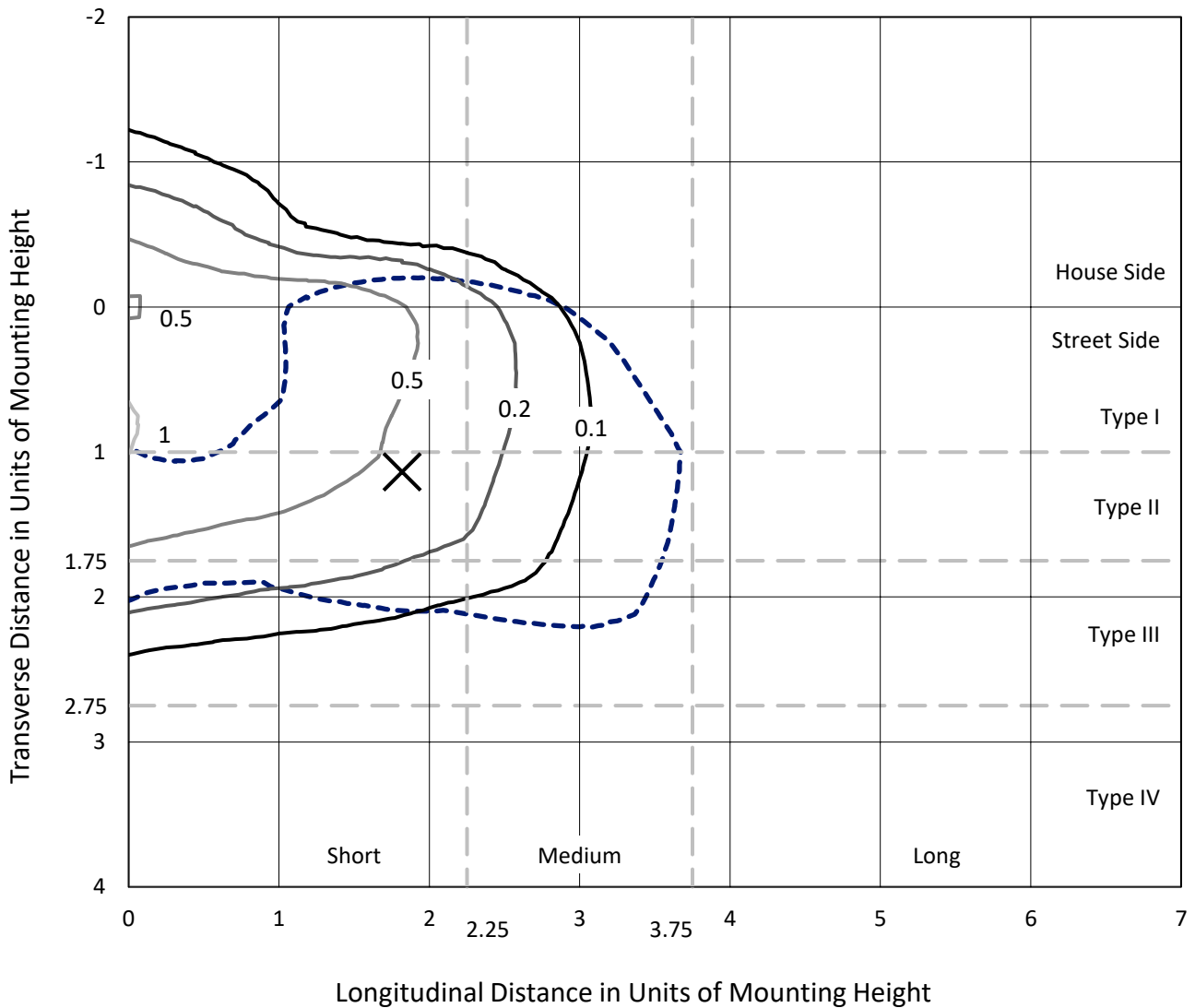
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

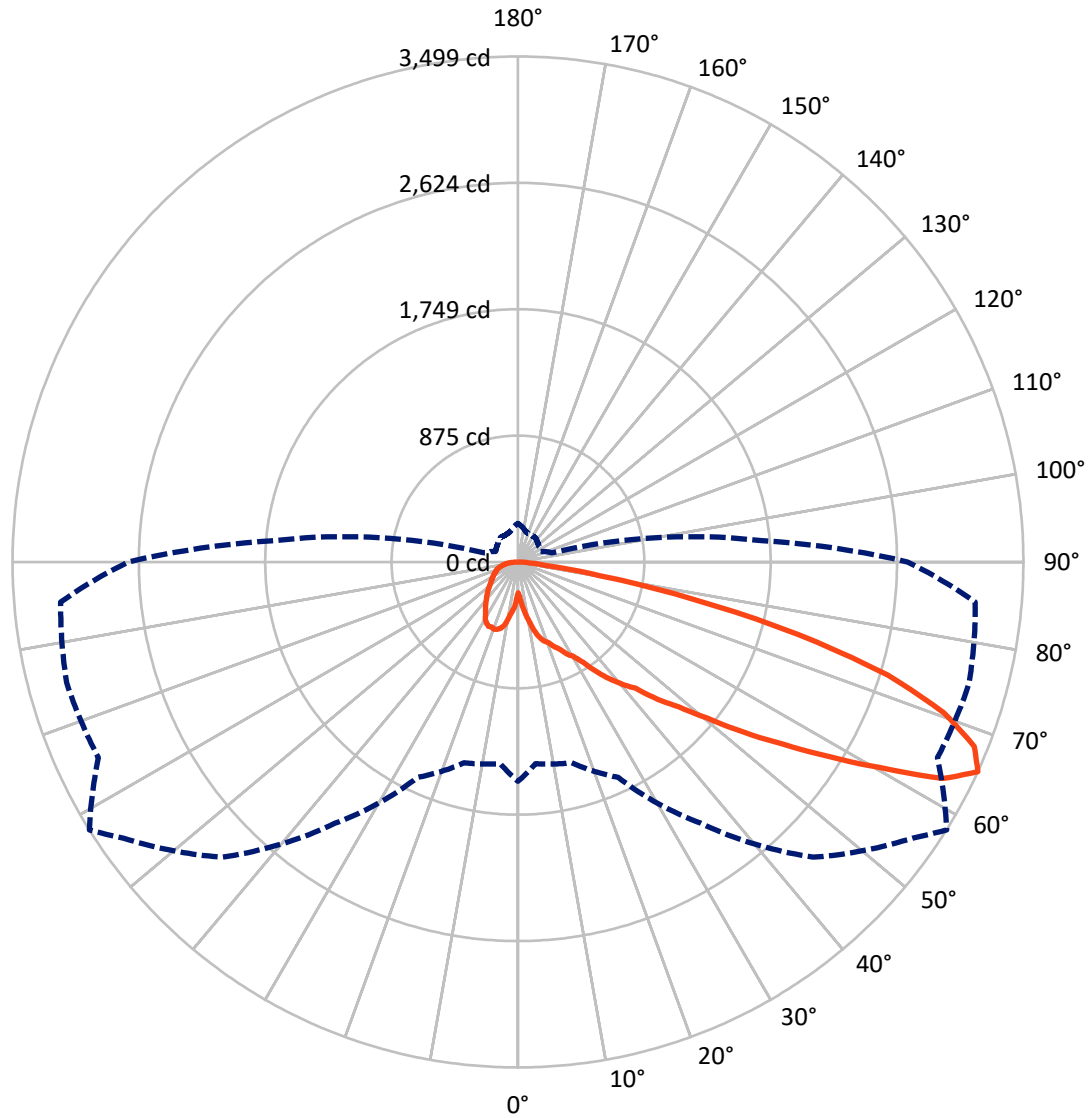
× Max cd
 - - - 1/2 Max cd



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

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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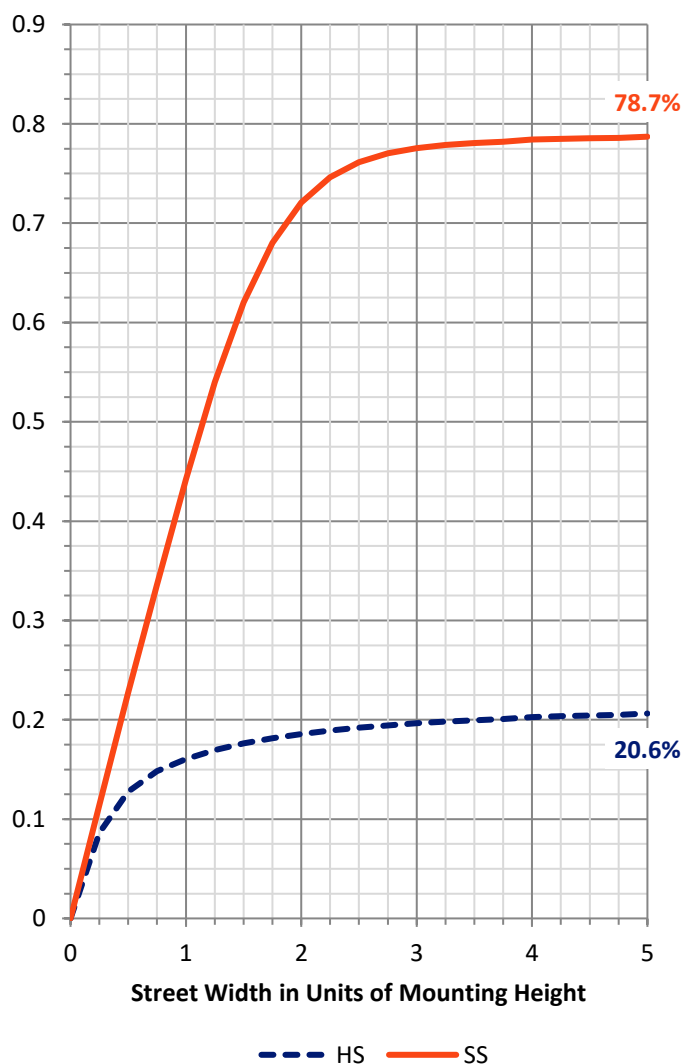
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1048.3	0.0	1048.3
	% Fixture	21.1	0.0	21.1
Street Side	Lumens	3928.7	0.0	3928.7
	% Fixture	78.9	0.0	78.9
Total	Lumens	4977.0	0.0	4977.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.6	0.7
10°-20°	142.0	2.9
20°-30°	272.5	5.5
30°-40°	450.0	9.0
40°-50°	747.9	15.0
50°-60°	1235.1	24.8
60°-70°	1385.6	27.8
70°-80°	630.0	12.7
80°-90°	81.3	1.6
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°	4977.0	100.0
0°-180°	4977.0	100.0

Coefficient of Utilization

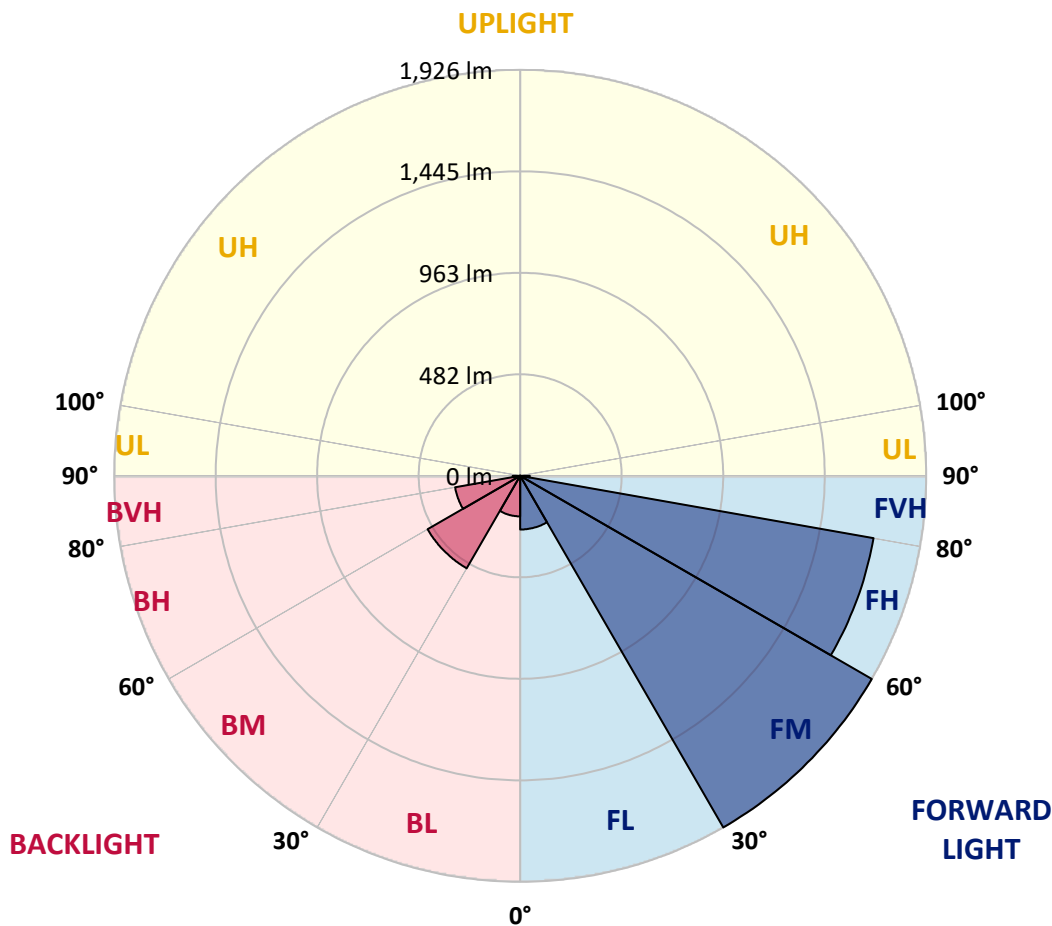


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	254.7	5.1			
FM (30°-60°)	1926.0	38.7			
FH (60°-80°)	1702.2	34.2			G1/1800
FVH (80°-90°)	45.8	0.9			G1/100
BL (0°-30°)	192.5	3.9	B1/500		
BM (30°-60°)	507.0	10.2	B1/1000		
BH (60°-80°)	313.4	6.3	B1/500		G1/500
BVH (80°-90°)	35.5	0.7			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 Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	213.7	213.7	213.7	213.7	213.7	213.7	213.7	213.7	213.7	213.7	213.7
2.5°	255.1	247.5	234.6	237.7	245.2	249.3	246.9	243.5	239.2	238.4	257.4
5°	330.4	315.7	309.7	307.2	298.0	292.7	302.0	300.7	305.7	314.8	333.5
7.5°	385.3	374.9	365.0	364.0	346.3	340.1	352.6	359.2	368.1	368.3	393.6
10°	414.7	405.8	405.6	396.3	394.8	406.7	406.9	411.8	412.9	423.4	418.5
12.5°	446.7	446.0	457.4	457.2	470.5	490.0	480.2	480.2	483.1	470.3	486.0
15°	522.7	529.4	508.0	511.5	511.5	530.6	530.0	533.7	542.6	539.3	532.3
17.5°	601.9	606.0	582.4	560.4	562.1	558.0	572.9	574.3	565.8	604.4	595.9
20°	652.9	669.0	619.3	591.7	597.1	601.9	602.5	593.6	589.3	648.5	636.9
22.5°	715.9	702.2	656.6	626.1	634.2	627.8	626.6	633.4	639.4	661.8	680.7
25°	758.0	756.9	702.2	668.8	659.9	658.1	670.7	668.0	682.3	722.9	711.1
27.5°	819.1	838.2	741.2	749.5	710.3	669.0	709.7	721.9	747.6	741.0	767.3
30°	937.7	923.4	822.0	819.7	775.4	740.8	769.0	758.6	804.8	803.4	822.8
32.5°	1034.5	1044.4	916.9	893.1	860.1	818.5	799.8	828.6	853.5	894.3	905.3
35°	1136.8	1134.6	1014.1	966.1	911.5	894.3	917.4	929.4	982.2	1019.7	993.6
37.5°	1296.0	1278.0	1140.2	1049.2	1008.3	1002.1	1041.5	1024.1	1081.3	1090.2	1104.9
40°	1444.0	1389.7	1255.4	1151.1	1086.3	1109.5	1110.7	1113.0	1143.7	1167.9	1240.7
42.5°	1584.7	1546.6	1372.5	1294.2	1198.6	1176.0	1190.1	1194.9	1272.4	1321.9	1422.7
45°	1777.1	1674.9	1540.8	1460.4	1353.4	1324.6	1314.7	1355.7	1430.5	1543.3	1629.7
47.5°	1939.8	1847.6	1719.7	1613.8	1494.2	1576.5	1520.1	1497.1	1597.6	1737.3	1874.9
50°	2074.7	1973.2	1847.8	1786.6	1767.6	1840.9	1694.6	1697.3	1789.3	1986.4	2144.2
52.5°	2179.2	2070.8	1959.7	1928.6	2035.1	2077.4	1971.7	1955.7	2022.9	2255.9	2445.3
55°	2276.8	2161.8	2076.0	2139.4	2318.9	2323.6	2316.2	2227.7	2308.5	2544.6	2757.0
57.5°	2301.9	2177.9	2120.9	2211.9	2454.6	2643.5	2717.7	2544.0	2626.2	2807.2	3024.0
60°	2172.8	2066.6	2043.8	2167.4	2528.0	2804.1	2997.9	2894.0	2863.2	3018.0	3210.9
62.5°	1908.3	1785.2	1803.6	1975.2	2450.7	2867.7	3219.2	3300.3	3113.3	3185.7	3292.6
65°	1518.8	1401.3	1438.6	1645.1	2208.0	2888.9	3332.4	3498.6	3203.7	3233.1	3177.0
67.5°	1071.1	964.4	1011.5	1278.4	1836.8	2618.2	3351.9	3406.2	3107.5	3097.8	2861.1
70°	606.9	539.9	590.9	813.5	1296.4	2085.7	3199.1	3127.6	2935.1	2797.0	2393.9
72.5°	278.4	255.3	279.8	414.1	746.4	1387.8	2611.7	2676.6	2529.0	2356.4	1821.2
75°	148.0	139.9	150.3	206.8	349.2	755.1	1855.6	2001.6	1923.0	1787.2	1188.0
77.5°	110.1	103.8	108.8	134.1	186.5	295.4	1054.4	1238.4	1268.3	1143.3	659.7
80°	84.4	79.4	84.4	101.4	129.1	140.3	450.8	577.2	657.4	531.2	262.2
82.5°	62.6	59.3	66.9	76.1	90.8	87.7	160.0	199.2	256.8	175.6	102.2
85°	49.7	45.6	48.5	51.6	58.0	48.1	73.2	81.9	86.6	72.5	37.7
87.5°	19.5	18.0	35.2	27.8	23.6	14.5	22.0	24.9	25.5	24.5	11.0
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°	213.7	213.7	213.7	213.7	213.7	213.7	213.7	213.7	213.7	213.7	213.7
2.5°	259.5	257.4	245.2	249.1	255.6	256.8	259.5	252.0	248.3	262.0	262.6
5°	335.1	324.0	318.2	318.8	314.6	308.2	317.9	324.4	326.9	337.0	340.7
7.5°	393.8	380.3	370.6	359.4	343.6	333.5	350.5	362.9	369.6	390.7	399.0
10°	419.9	409.1	407.1	393.0	392.6	392.4	391.5	387.2	401.5	399.4	405.2
12.5°	473.8	471.5	451.8	446.2	446.9	446.2	428.8	428.0	428.2	447.3	440.4
15°	524.0	524.4	506.3	486.0	467.8	462.2	455.4	452.3	456.8	467.6	461.0
17.5°	585.9	588.0	536.4	504.3	480.2	479.6	463.2	444.0	471.7	478.4	471.1
20°	625.9	617.2	553.8	499.9	493.1	474.4	454.1	427.6	451.6	467.8	472.4
22.5°	663.9	648.7	570.0	507.6	474.8	452.7	433.0	415.8	423.4	441.5	438.6
25°	689.6	685.4	592.4	526.0	474.2	424.9	398.4	387.4	391.3	419.3	416.6
27.5°	750.9	706.2	588.4	530.8	454.3	387.0	373.7	361.9	357.9	388.2	396.5
30°	792.0	773.5	614.7	523.3	429.2	355.9	336.4	333.9	335.1	369.6	371.8
32.5°	861.6	813.7	657.9	494.7	392.8	332.9	310.5	311.5	317.1	342.2	347.4
35°	934.1	905.5	663.7	474.2	363.1	308.4	299.3	292.0	295.1	317.1	318.2
37.5°	1068.9	970.0	699.3	442.5	341.4	299.1	281.7	275.2	276.9	289.3	298.3
40°	1187.4	1099.5	682.7	411.8	314.4	286.6	264.9	260.1	255.1	267.4	273.0
42.5°	1377.5	1192.0	677.1	378.1	301.8	269.9	254.9	242.3	237.5	247.9	258.0
45°	1567.5	1290.0	646.7	343.9	284.0	268.6	240.4	228.4	229.6	239.0	249.3
47.5°	1779.4	1421.6	595.1	310.7	264.5	262.6	225.9	220.7	224.5	234.8	245.2
50°	2029.7	1561.3	552.4	280.8	250.6	244.6	224.1	217.8	221.4	233.6	243.7
52.5°	2303.5	1714.5	521.3	253.3	234.8	230.3	226.5	220.5	224.7	235.2	245.8
55°	2575.7	1854.4	500.1	234.4	221.4	224.3	231.7	227.4	229.4	237.3	247.9
57.5°	2777.6	1928.2	457.6	214.3	210.4	220.7	232.3	225.1	226.3	237.3	248.7
60°	2894.9	1942.3	387.8	197.9	201.7	213.7	225.9	216.6	215.8	233.8	248.1
62.5°	2882.0	1860.4	307.6	183.0	191.7	203.1	216.2	207.3	209.5	234.2	249.3
65°	2698.0	1693.1	244.6	170.4	179.7	191.5	208.1	204.6	215.6	250.8	267.2
67.5°	2374.6	1448.8	196.5	158.6	168.5	183.6	213.7	223.0	227.8	267.8	284.6
70°	1924.5	1125.7	163.7	148.2	159.6	187.4	229.9	228.0	224.1	259.7	273.0
72.5°	1390.3	771.6	144.0	138.0	148.6	176.2	230.3	220.3	215.3	237.1	246.6
75°	869.9	460.3	125.8	125.2	131.8	157.9	219.9	211.0	197.5	208.3	220.7
77.5°	496.8	235.7	105.9	111.5	115.4	137.0	196.9	188.8	176.8	181.4	193.6
80°	189.6	114.0	89.3	99.1	98.0	116.1	166.8	165.0	151.3	152.8	160.2
82.5°	89.3	63.8	74.2	85.2	79.6	92.4	135.6	134.9	122.9	111.3	117.3
85°	33.2	34.0	54.3	64.9	55.3	59.7	98.0	95.3	83.7	70.7	78.1
87.5°	7.5	12.2	26.7	33.8	19.3	18.4	39.6	34.4	33.2	19.7	20.7
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)