

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: P367246

Luminaire Tested: **MSA-SA2A-830-U-SL4**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367246
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-20)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2A-830-U-SL4
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS
EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6152 lumens
Efficiency: N/A
Efficacy: 93.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

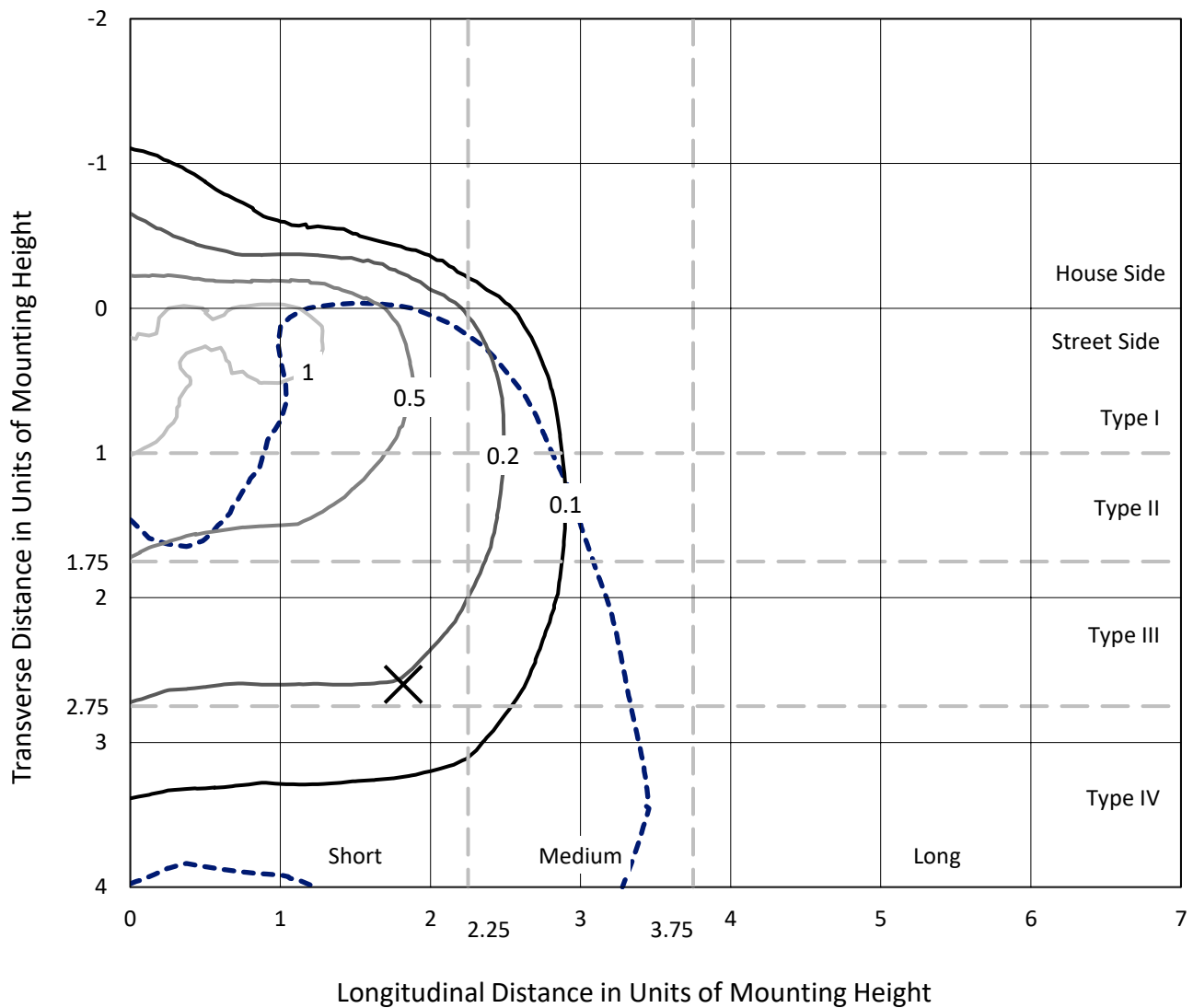
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

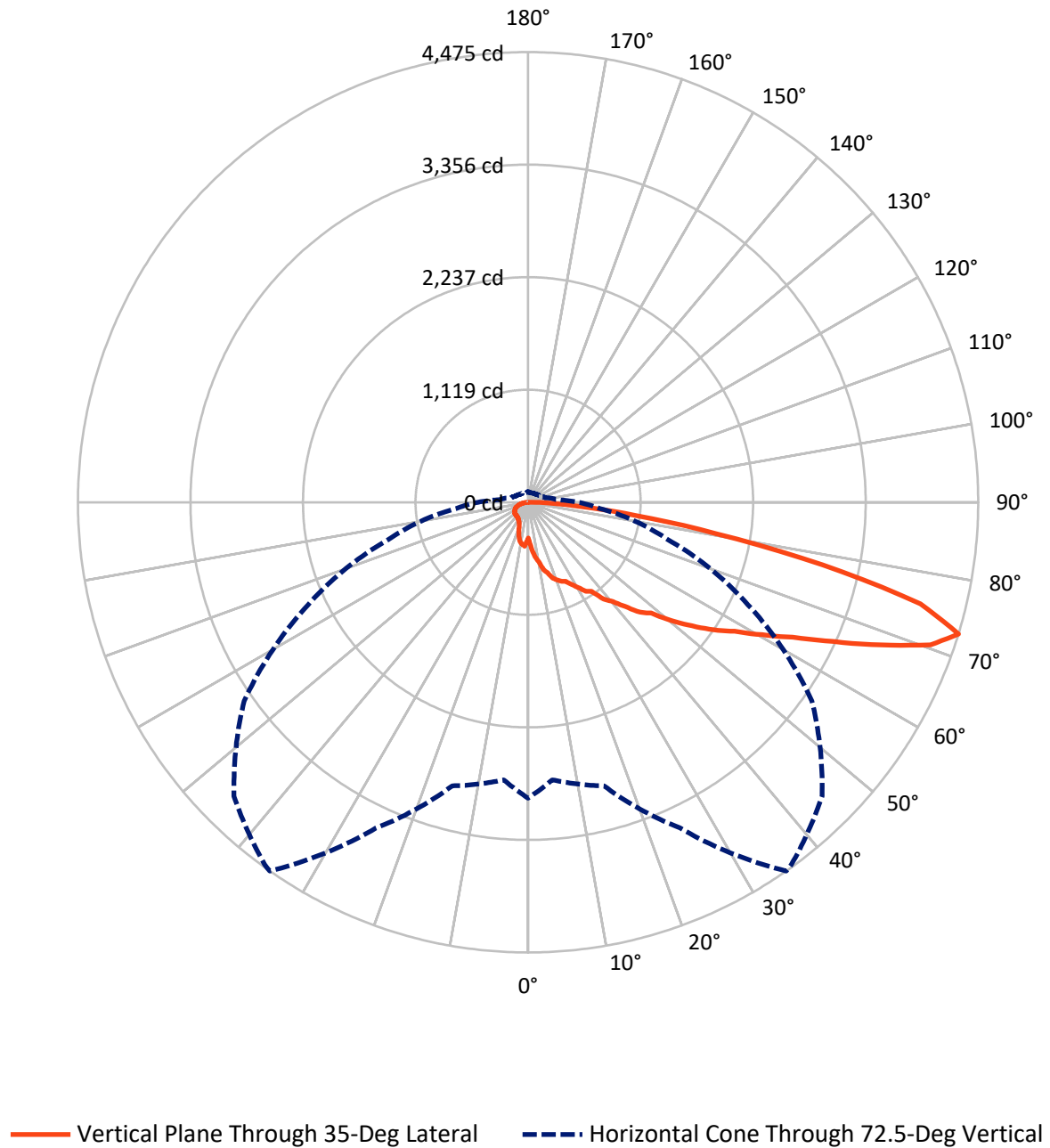


Based on 25 foot mounting height. Maximum calculated value = 1.2 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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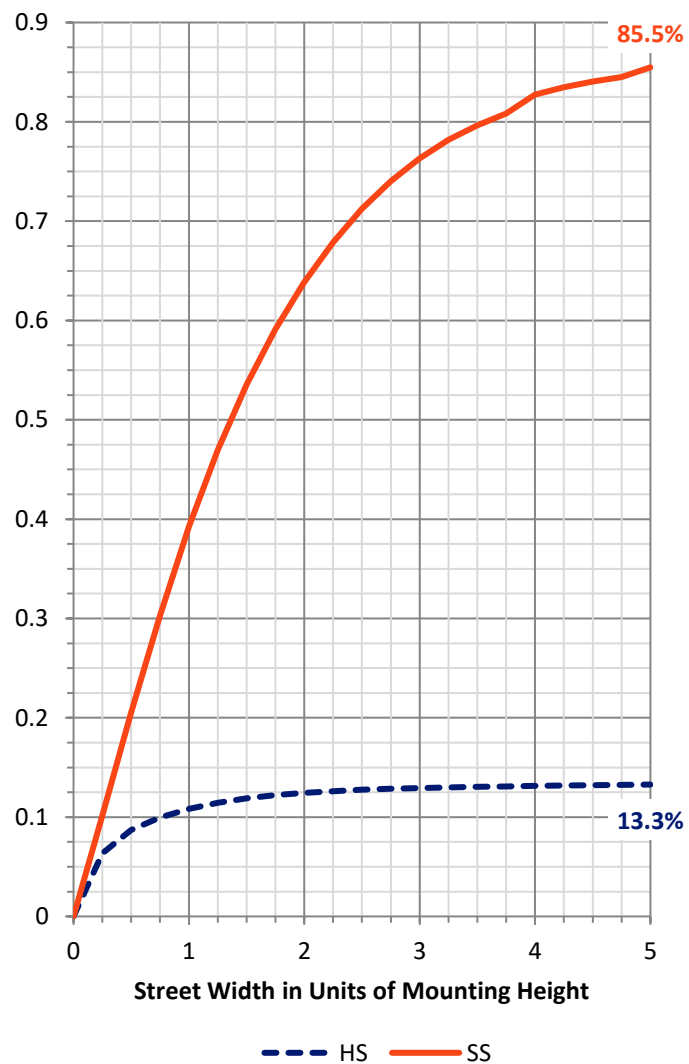
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	825.6	0.0	825.6
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	5326.4	0.0	5326.4
	% Fixture	86.6	0.0	86.6
Total	Lumens	6152.0	0.0	6152.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.3	0.8
10°-20°	166.4	2.7
20°-30°	289.2	4.7
30°-40°	483.4	7.9
40°-50°	838.9	13.6
50°-60°	1268.3	20.6
60°-70°	1643.0	26.7
70°-80°	1212.4	19.7
80°-90°	203.2	3.3
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°	6152.0	100.0
0°-180°	6152.0	100.0

Coefficient of Utilization



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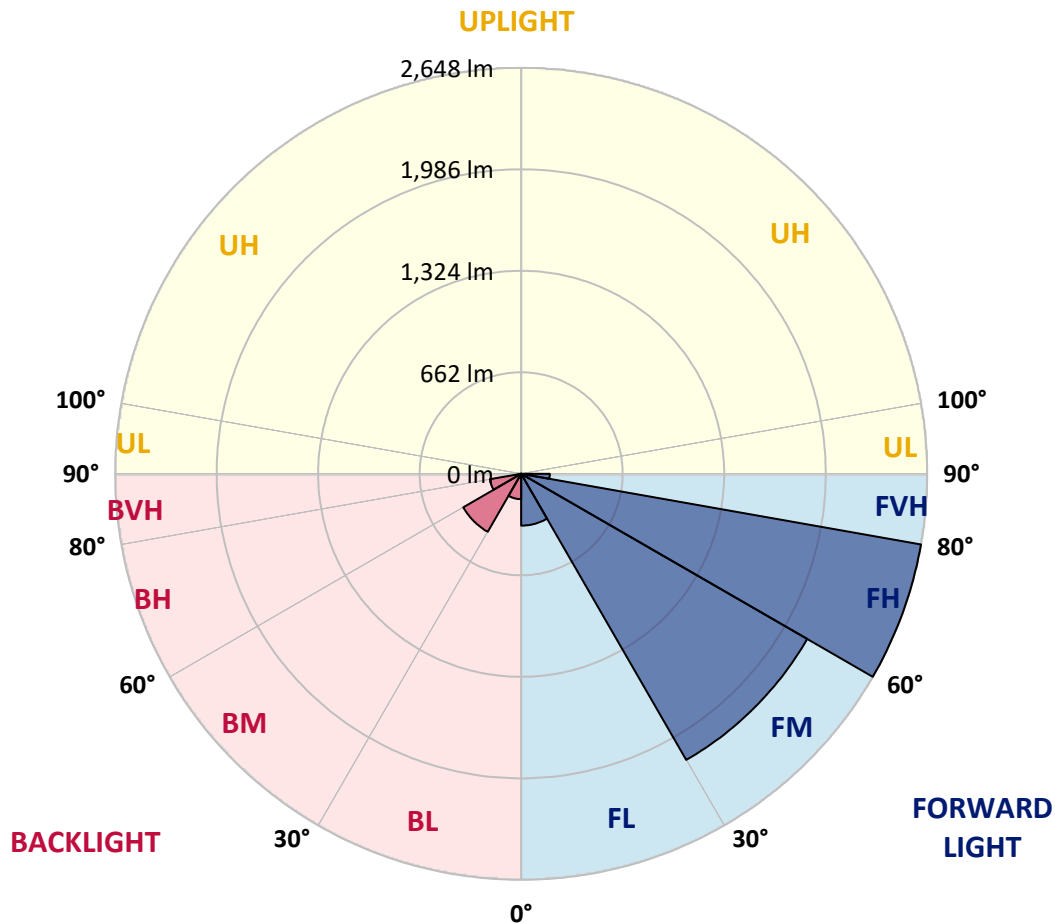
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	337.9	5.5			
FM	(30°-60°)	2154.2	35.0			
FH	(60°-80°)	2647.8	43.0			G2/5000
FVH	(80°-90°)	186.6	3.0			G2/225
BL	(0°-30°)	165.0	2.7	B1/500		
BM	(30°-60°)	436.3	7.1	B1/1000		
BH	(60°-80°)	207.6	3.4	B1/500		G1/500
BVH	(80°-90°)	16.6	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-G2

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	355.5	355.5	355.5	355.5	355.5	355.5	355.5	355.5	355.5	355.5	355.5
2.5°	443.5	422.2	403.8	403.1	420.1	426.7	424.1	418.3	411.5	397.0	428.5
5°	555.6	525.2	519.4	512.5	497.1	501.3	476.0	495.2	501.3	515.2	536.2
7.5°	621.8	603.9	590.0	584.2	557.4	554.3	535.7	563.0	574.5	572.7	603.9
10°	647.8	631.5	632.5	613.6	605.0	608.6	610.7	611.3	618.4	624.1	608.4
12.5°	661.2	667.5	690.6	677.7	688.7	693.2	715.3	692.7	693.5	663.8	680.1
15°	728.6	744.4	731.0	730.5	727.1	734.4	753.3	738.1	749.9	740.5	719.5
17.5°	810.0	814.8	789.0	778.5	792.2	789.8	785.1	787.5	758.1	812.7	786.9
20°	835.0	853.6	819.8	778.5	823.7	829.7	828.7	818.4	768.0	846.8	821.9
22.5°	907.5	882.3	855.5	829.2	852.3	855.7	850.0	825.5	808.7	838.7	858.4
25°	940.3	934.2	900.1	897.0	871.5	859.4	869.4	862.3	845.8	899.1	877.3
27.5°	1015.4	1008.3	929.8	962.1	925.1	921.9	869.1	892.8	909.3	905.4	937.9
30°	1100.5	1108.6	993.8	1026.1	983.3	977.6	924.5	954.5	965.8	969.4	1010.1
32.5°	1195.0	1217.3	1103.3	1076.8	1054.0	1057.9	1013.0	958.4	1002.2	1088.1	1105.7
35°	1297.4	1306.6	1187.1	1147.2	1087.6	1083.4	1084.2	1091.0	1135.4	1233.3	1247.0
37.5°	1486.7	1444.2	1339.4	1238.3	1218.3	1179.2	1205.7	1226.8	1271.1	1421.3	1478.6
40°	1603.3	1571.8	1412.1	1353.6	1298.4	1302.1	1351.7	1351.5	1456.2	1611.2	1698.6
42.5°	1711.2	1676.8	1526.3	1467.5	1415.3	1428.1	1442.3	1467.3	1668.1	1917.8	1957.8
45°	1798.1	1722.8	1614.6	1601.4	1558.4	1541.3	1601.4	1641.4	1921.5	2166.0	2189.1
47.5°	1857.2	1795.2	1689.4	1677.9	1646.1	1687.8	1851.9	1877.7	2117.9	2415.2	2413.3
50°	1947.0	1862.2	1766.6	1760.6	1850.1	1872.4	2072.5	2069.9	2309.1	2622.1	2578.8
52.5°	2050.4	1943.6	1839.9	1904.7	2041.3	2052.3	2225.8	2296.5	2517.8	2821.6	2708.5
55°	2169.4	2049.9	1949.6	2036.3	2239.5	2206.9	2382.6	2555.1	2779.1	3032.0	2802.2
57.5°	2316.7	2171.8	2090.6	2222.4	2420.4	2449.3	2607.1	2824.3	2989.4	3162.7	2870.5
60°	2472.1	2302.0	2227.7	2353.2	2673.8	2706.9	2861.3	3048.0	3225.2	3285.9	2857.6
62.5°	2620.5	2436.4	2369.2	2524.1	2954.8	3036.7	3150.6	3269.6	3421.4	3315.8	2701.9
65°	2785.7	2601.3	2559.1	2791.4	3335.8	3417.2	3566.0	3530.3	3488.6	3209.7	2444.3
67.5°	2960.5	2773.3	2781.2	3101.5	3785.0	3798.9	4027.6	3790.3	3409.5	2928.8	2011.9
70°	3054.5	2862.9	2944.0	3432.1	4242.2	4222.2	4268.9	3860.1	3087.4	2315.1	1386.7
72.5°	2940.6	2769.6	2918.3	3571.3	4474.8	4453.3	4133.5	3445.5	2413.9	1439.7	718.9
75°	2489.7	2324.8	2552.2	3183.5	4028.4	4048.4	3517.7	2562.2	1381.9	579.0	298.5
77.5°	1691.8	1606.7	1801.5	2372.9	2992.3	3061.4	2610.0	1498.3	580.3	239.7	180.7
80°	894.1	853.6	997.5	1367.0	1894.7	1946.2	1534.8	746.2	297.2	155.2	128.9
82.5°	485.8	468.7	545.9	702.9	1076.6	1121.5	795.9	495.7	200.3	97.2	78.8
85°	326.4	319.8	371.0	377.6	509.1	523.8	417.0	381.8	120.3	47.5	52.0
87.5°	163.3	156.8	195.4	172.5	194.3	194.6	191.2	243.7	30.5	15.8	9.5
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°	355.5	355.5	355.5	355.5	355.5	355.5	355.5	355.5	355.5	355.5	355.5
2.5°	429.0	419.9	388.1	387.8	392.5	389.4	391.8	378.9	373.4	398.6	397.3
5°	533.3	505.7	479.2	470.0	459.2	435.9	437.2	437.5	433.5	448.5	449.5
7.5°	594.5	561.4	537.0	488.1	449.8	419.9	423.8	428.3	423.8	443.8	451.1
10°	603.4	577.1	548.0	493.6	468.2	441.1	413.8	389.7	386.8	377.6	380.5
12.5°	656.4	634.6	573.7	514.1	484.5	443.0	393.1	365.5	342.4	346.3	339.0
15°	700.0	684.5	611.5	533.6	462.7	411.2	358.2	320.3	299.6	297.2	289.9
17.5°	759.1	737.0	615.0	520.2	434.6	372.9	313.0	270.2	261.3	257.6	253.9
20°	787.5	747.8	602.6	478.1	401.7	327.2	268.4	231.6	229.0	235.5	234.2
22.5°	812.1	756.7	591.6	452.7	350.5	281.0	237.9	213.7	210.8	219.3	220.8
25°	826.6	782.2	579.5	426.7	318.8	246.6	215.0	201.4	201.9	212.9	211.6
27.5°	891.7	791.1	549.0	396.0	282.3	221.1	204.0	196.9	194.0	209.3	210.6
30°	932.7	849.4	542.2	363.4	255.2	202.4	194.0	191.2	190.6	209.0	210.3
32.5°	1008.8	868.9	545.4	328.0	230.8	196.7	186.7	186.4	191.7	209.3	211.4
35°	1114.4	950.8	530.1	307.7	217.4	187.7	180.9	183.0	191.9	211.1	214.0
37.5°	1320.2	1028.0	534.9	288.8	212.9	184.9	179.3	180.7	195.1	215.8	223.7
40°	1483.3	1167.9	527.5	279.4	206.9	184.3	175.9	181.2	194.8	218.5	225.6
42.5°	1719.6	1279.5	528.3	269.9	206.6	182.2	175.4	181.7	194.3	216.1	225.8
45°	1922.3	1379.6	539.6	264.4	204.0	185.6	174.6	182.5	190.9	207.7	218.5
47.5°	2088.5	1491.2	551.1	259.2	203.0	188.8	173.8	177.0	185.1	198.2	208.0
50°	2224.0	1569.7	565.8	258.1	203.0	187.2	171.7	171.5	178.3	188.8	198.0
52.5°	2329.6	1625.1	575.8	259.4	203.0	181.2	169.1	167.0	171.2	178.8	188.0
55°	2406.0	1642.1	567.7	262.8	202.7	175.7	164.4	162.5	164.6	169.9	178.6
57.5°	2436.7	1597.2	519.1	256.8	202.7	171.7	158.6	156.5	158.6	162.5	171.2
60°	2359.8	1452.8	449.0	241.3	198.8	166.5	152.0	150.7	153.9	157.3	165.7
62.5°	2166.8	1260.9	374.2	222.9	190.6	162.0	145.7	146.0	151.0	155.7	164.1
65°	1866.9	1028.8	311.9	204.3	180.4	154.9	139.2	141.0	148.1	154.4	162.8
67.5°	1469.1	762.3	262.6	186.2	165.9	143.4	131.8	132.3	137.3	143.4	151.5
70°	982.0	485.0	215.8	164.9	147.0	128.4	120.5	118.7	117.4	122.6	129.7
72.5°	498.1	286.5	177.2	141.0	126.6	112.1	106.1	101.4	97.7	100.8	106.3
75°	261.0	200.3	143.1	117.1	104.5	95.3	90.9	84.5	81.9	83.8	87.7
77.5°	184.6	156.8	115.8	92.7	85.1	75.6	76.4	69.8	67.7	68.8	73.0
80°	141.8	124.2	89.0	70.1	65.6	56.5	59.1	55.1	52.5	52.0	55.1
82.5°	96.6	93.5	63.3	49.1	46.0	39.4	43.1	41.5	38.1	36.0	37.5
85°	65.1	62.0	38.6	28.4	27.0	20.5	26.3	25.2	22.3	19.2	19.4
87.5°	11.3	20.7	11.0	7.1	6.6	2.4	6.0	5.8	5.3	2.6	2.1
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)