

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: P366991

Luminaire Tested: **MSA-SA1C-830-U-T4FT-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366991
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-13)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1C-830-U-T4FT-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3732 lumens
Efficiency: N/A
Efficacy: 63.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B0 - U0 - G2

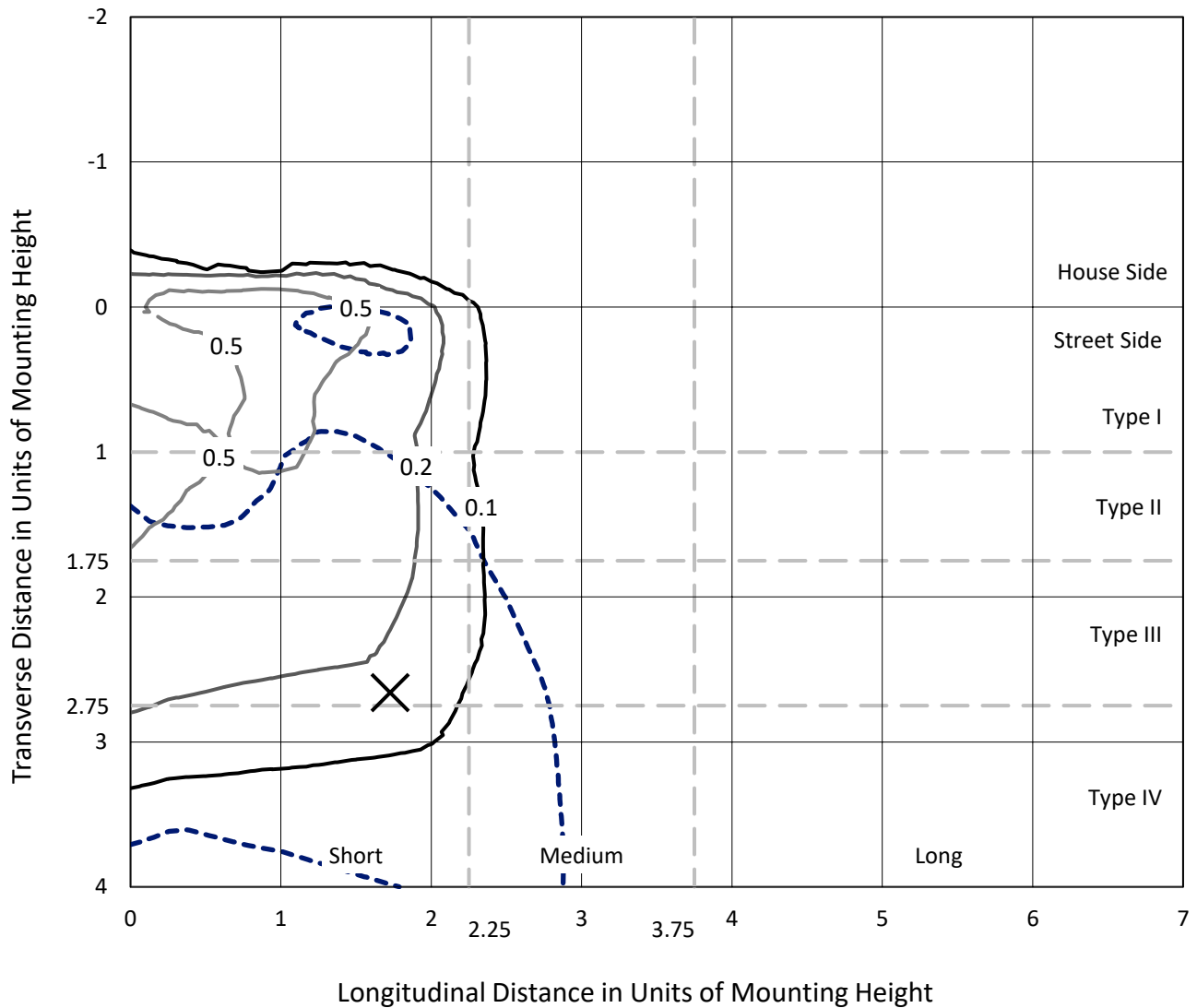
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

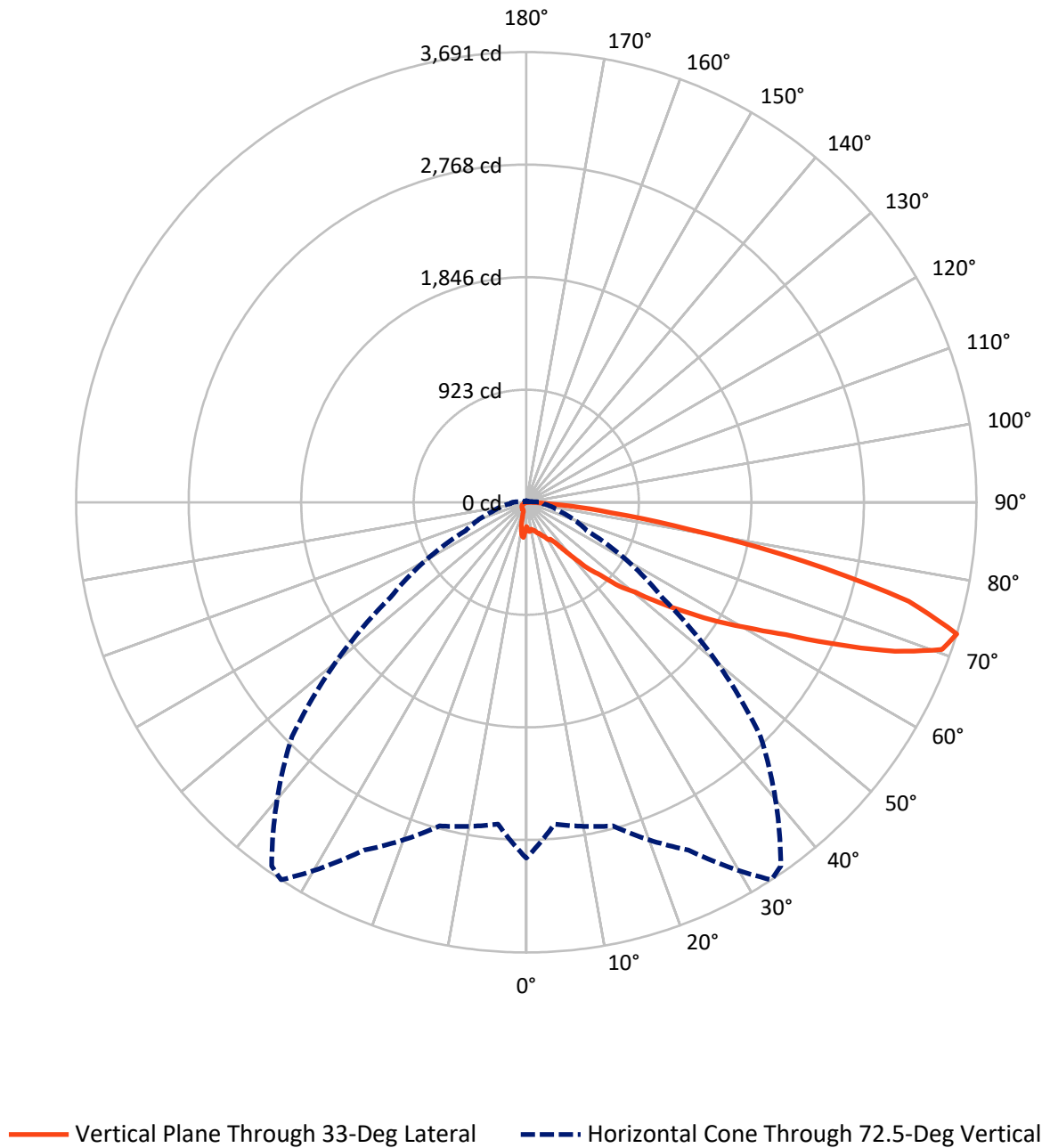
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.9 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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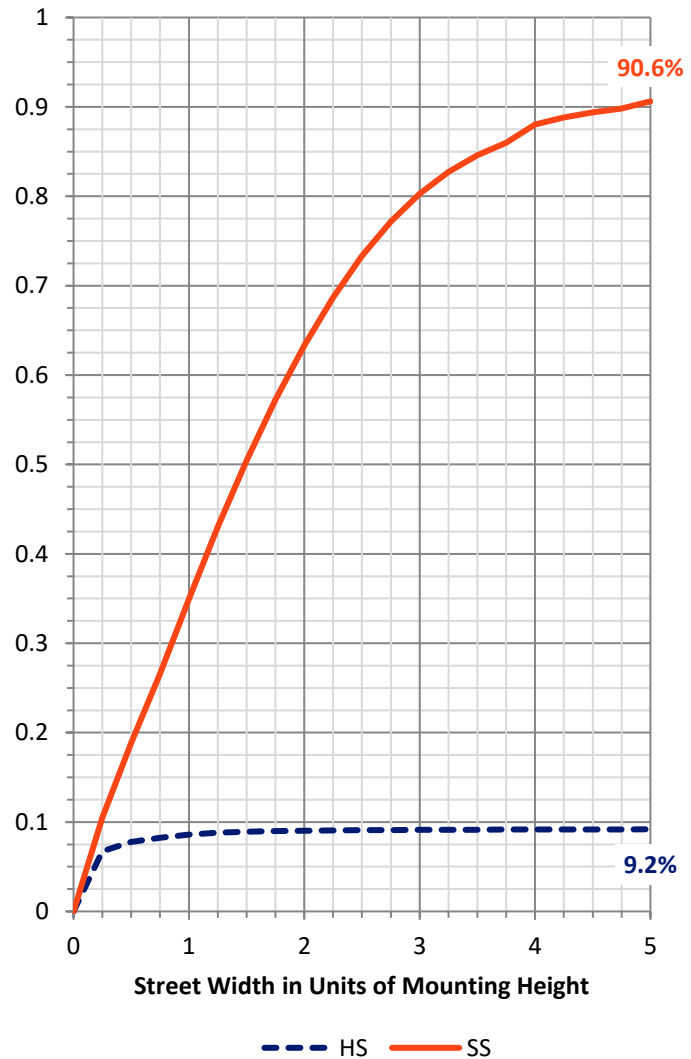
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	345.1	0.0	345.1
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	3386.9	0.0	3386.9
	% Fixture	90.8	0.0	90.8
Total	Lumens	3732.0	0.0	3732.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	25.7	0.7
10°-20°	76.6	2.1
20°-30°	129.8	3.5
30°-40°	237.6	6.4
40°-50°	501.5	13.4
50°-60°	839.0	22.5
60°-70°	1123.1	30.1
70°-80°	733.6	19.7
80°-90°	65.0	1.7
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°	3732.0	100.0
0°-180°	3732.0	100.0

Coefficient of Utilization

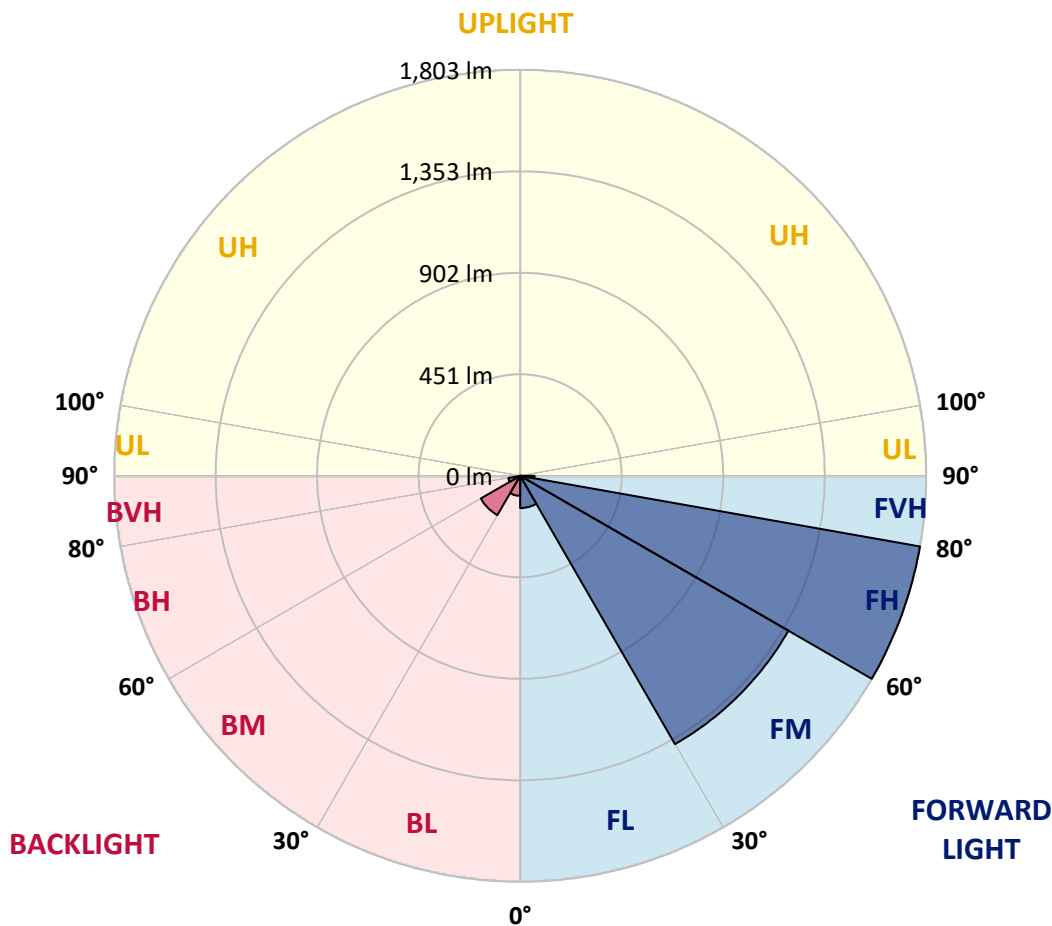


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	143.3	3.8			
FM (30°-60°)	1376.4	36.9			
FH (60°-80°)	1803.5	48.3			G2/5000
FVH (80°-90°)	63.8	1.7			G1/100
BL (0°-30°)	88.8	2.4	B0/110		
BM (30°-60°)	201.7	5.4	B0/220		
BH (60°-80°)	53.3	1.4	B0/110		G0/110
BVH (80°-90°)	1.3	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G2
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	198.5	198.5	198.5	198.5	198.5	198.5	198.5	198.5	198.5	198.5	198.5
2.5°	236.6	227.5	214.2	215.1	217.4	219.2	224.2	222.1	218.2	218.0	236.6
5°	250.7	240.6	239.7	241.0	240.4	243.7	239.5	253.0	264.4	278.1	300.0
7.5°	243.9	239.1	233.1	239.3	239.1	237.5	240.1	267.5	295.1	312.5	348.7
10°	224.2	218.8	223.4	225.4	224.0	231.2	249.3	271.6	304.6	341.1	358.7
12.5°	218.6	221.9	223.6	223.6	237.5	241.2	268.7	289.9	329.0	357.8	409.0
15°	240.4	246.8	235.4	232.9	237.2	239.3	270.0	295.5	345.6	398.2	441.1
17.5°	275.0	274.5	256.9	247.2	254.0	259.0	276.0	305.8	335.3	429.9	492.1
20°	298.8	299.2	267.5	247.2	269.8	272.7	291.5	315.4	338.6	445.9	525.5
22.5°	329.5	318.5	283.5	263.8	279.1	281.8	302.5	321.4	355.6	444.0	568.1
25°	354.5	347.5	303.3	289.7	303.3	299.6	318.5	346.9	373.8	473.7	593.2
27.5°	393.5	381.5	317.4	319.9	319.1	321.8	326.1	369.6	405.9	475.1	651.2
30°	429.7	422.7	348.9	348.9	357.0	351.8	354.9	407.6	437.0	508.7	716.5
32.5°	467.2	467.7	386.0	366.3	359.9	381.3	402.2	426.0	474.5	566.3	816.4
35°	566.5	558.2	457.1	408.0	402.8	401.6	435.1	499.6	541.0	641.3	950.8
37.5°	766.4	737.6	610.0	502.5	483.0	476.4	514.5	580.6	621.8	751.5	1173.2
40°	971.6	918.7	777.0	655.8	592.6	564.0	608.3	664.5	737.8	873.4	1378.9
42.5°	1151.6	1086.4	902.8	821.1	738.9	726.4	684.8	776.2	903.6	1050.7	1580.5
45°	1327.1	1198.7	1014.7	950.0	850.1	857.2	843.1	922.3	1075.8	1245.1	1759.3
47.5°	1447.9	1332.5	1151.8	1067.9	1027.9	986.7	1098.6	1180.8	1229.1	1368.6	1913.9
50°	1578.0	1461.2	1269.7	1211.1	1158.5	1200.1	1345.4	1356.3	1352.4	1483.8	2019.2
52.5°	1746.1	1608.3	1405.0	1338.7	1368.6	1410.0	1577.6	1579.7	1462.0	1580.7	2095.0
55°	1901.5	1748.8	1585.3	1522.7	1585.1	1620.1	1806.0	1737.8	1525.8	1646.6	2132.3
57.5°	2120.5	1943.8	1825.0	1714.8	1841.2	1807.6	2006.7	1905.4	1597.5	1690.3	2118.6
60°	2397.3	2189.3	2070.4	1953.7	2089.2	2112.0	2202.8	1989.1	1625.3	1704.6	2036.4
62.5°	2678.9	2469.6	2313.2	2234.0	2387.8	2462.8	2384.3	2030.8	1591.9	1676.7	1850.1
65°	3028.3	2760.3	2577.6	2531.2	2816.1	2926.3	2598.9	2040.9	1527.5	1522.7	1487.5
67.5°	3267.6	3006.7	2839.1	2916.8	3260.9	3269.8	2791.6	2044.0	1310.5	1192.2	976.3
70°	3324.3	3045.0	2970.0	3198.8	3615.9	3503.8	2853.8	1886.6	972.0	707.6	446.3
72.5°	2918.2	2649.3	2746.9	3145.5	3691.3	3639.9	2716.4	1361.1	547.2	283.0	137.0
75°	1790.0	1627.4	2060.6	2666.9	3240.2	3207.1	2119.3	703.2	220.5	113.1	51.2
77.5°	778.5	722.9	1075.4	1769.5	2328.3	2298.7	1241.8	259.0	114.0	79.6	25.9
80°	257.6	249.9	407.4	837.9	1363.8	1337.7	523.2	107.7	81.2	63.8	14.5
82.5°	61.1	60.7	142.1	385.6	694.7	673.0	160.6	59.5	58.8	50.3	7.7
85°	15.3	15.7	39.4	157.7	282.2	248.8	41.9	29.6	41.4	34.2	3.9
87.5°	0.0	0.0	10.2	22.6	42.7	26.7	4.6	7.9	11.6	12.2	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



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	198.5	198.5	198.5	198.5	198.5	198.5	198.5	198.5	198.5	198.5	198.5
2.5°	240.8	238.5	219.8	224.4	231.4	230.8	235.4	231.9	228.8	244.1	242.6
5°	306.2	293.8	288.0	296.1	291.7	281.6	290.1	288.6	286.1	291.3	295.3
7.5°	355.4	344.0	338.8	321.8	297.1	277.7	280.8	273.5	266.7	274.7	283.0
10°	371.5	365.3	364.7	331.5	308.3	280.1	246.8	218.0	210.3	200.2	204.7
12.5°	415.4	419.2	395.8	357.0	312.3	258.2	198.9	158.1	141.5	130.7	131.4
15°	451.5	464.5	430.6	360.9	274.7	196.8	132.4	95.7	85.4	82.7	81.8
17.5°	505.2	517.8	441.3	333.0	221.5	133.4	85.2	74.6	75.2	77.1	76.7
20°	544.9	543.1	432.0	283.5	163.3	87.4	71.3	69.8	73.1	78.5	77.3
22.5°	583.3	570.4	426.2	237.7	105.7	70.2	68.8	68.6	71.7	76.9	78.3
25°	610.6	612.7	416.5	186.1	76.9	65.3	66.5	68.4	71.5	77.1	76.3
27.5°	688.9	630.9	375.9	135.1	64.9	62.6	65.7	69.4	70.4	77.5	77.7
30°	739.7	699.7	349.3	91.0	59.9	57.8	64.0	69.0	70.2	79.4	80.0
32.5°	828.2	729.3	318.7	67.5	55.7	56.4	60.3	66.9	72.7	82.5	82.9
35°	938.2	824.5	263.1	60.7	54.3	53.3	55.1	62.8	72.3	82.9	85.0
37.5°	1147.7	881.4	208.7	58.8	54.3	52.4	54.3	58.8	71.1	87.0	91.4
40°	1288.0	997.5	150.4	58.4	53.3	51.6	52.2	56.8	67.5	84.5	91.0
42.5°	1460.8	1046.4	110.9	57.4	52.2	49.7	50.1	55.9	64.0	79.4	84.1
45°	1602.3	1082.0	87.2	57.0	49.7	48.9	49.7	55.3	60.7	68.2	72.5
47.5°	1709.8	1123.4	70.0	54.3	49.1	48.9	47.9	51.8	55.1	57.0	59.9
50°	1788.6	1114.1	58.0	50.1	47.0	48.3	46.4	47.0	47.9	46.8	50.1
52.5°	1836.8	1080.6	48.3	45.2	44.5	45.6	43.3	41.4	40.0	39.2	41.2
55°	1854.5	1013.2	41.0	38.7	40.2	40.6	38.7	35.4	32.9	31.7	33.4
57.5°	1821.1	910.7	35.6	32.1	35.4	35.4	32.9	29.4	26.5	24.4	26.1
60°	1736.6	797.3	31.7	26.7	30.3	30.5	27.6	23.8	21.5	19.5	20.5
62.5°	1579.1	673.8	27.8	23.2	26.1	26.3	22.8	19.3	17.6	15.3	16.2
65°	1264.1	515.3	23.6	20.5	22.6	22.0	18.9	16.4	14.3	12.2	12.6
67.5°	820.5	318.1	20.5	18.6	19.1	18.4	16.0	14.3	12.0	10.4	10.6
70°	367.4	137.0	18.0	16.8	16.6	15.5	13.5	13.3	11.8	10.4	10.4
72.5°	113.3	51.6	15.5	15.1	14.3	13.1	11.8	12.6	11.6	9.9	9.7
75°	44.8	23.6	12.8	12.8	12.4	10.8	10.6	11.4	10.8	9.1	8.7
77.5°	23.4	14.9	10.6	11.0	10.8	8.3	9.5	10.4	9.9	7.7	6.4
80°	13.9	9.1	7.9	8.9	8.7	5.8	7.3	6.6	4.8	2.3	0.6
82.5°	7.7	4.1	3.5	5.2	5.2	2.1	3.7	3.3	1.9	0.0	0.0
85°	3.7	2.9	2.7	2.9	2.1	0.6	1.9	1.9	1.0	0.0	0.0
87.5°	1.9	1.7	1.2	1.0	0.8	0.0	0.6	0.8	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)