

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: P366969

Luminaire Tested: **MSA-SA1C-760-U-T4FT-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366969
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-760-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: 4697 lumens
Efficiency: N/A
Efficacy: 79.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

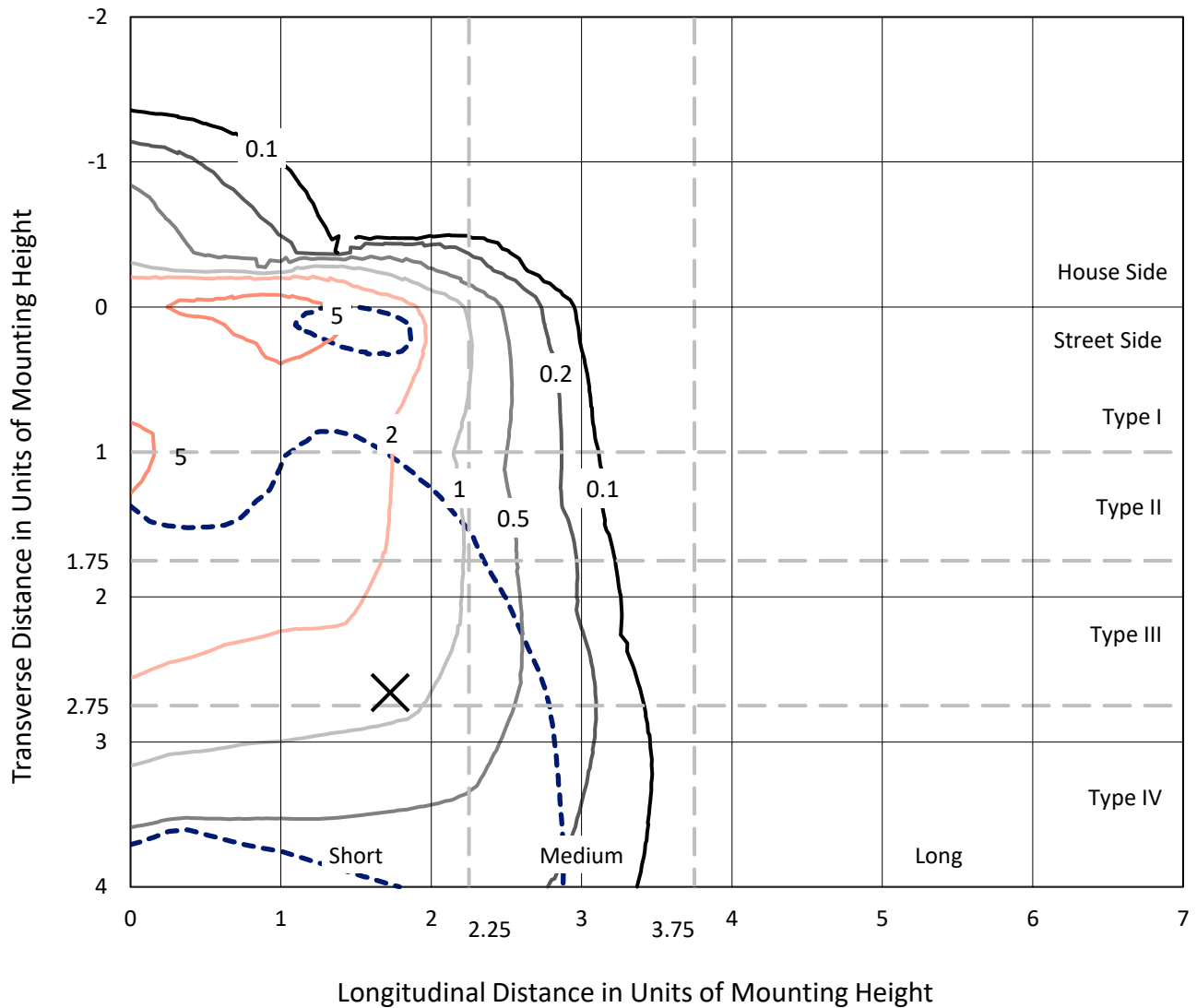
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

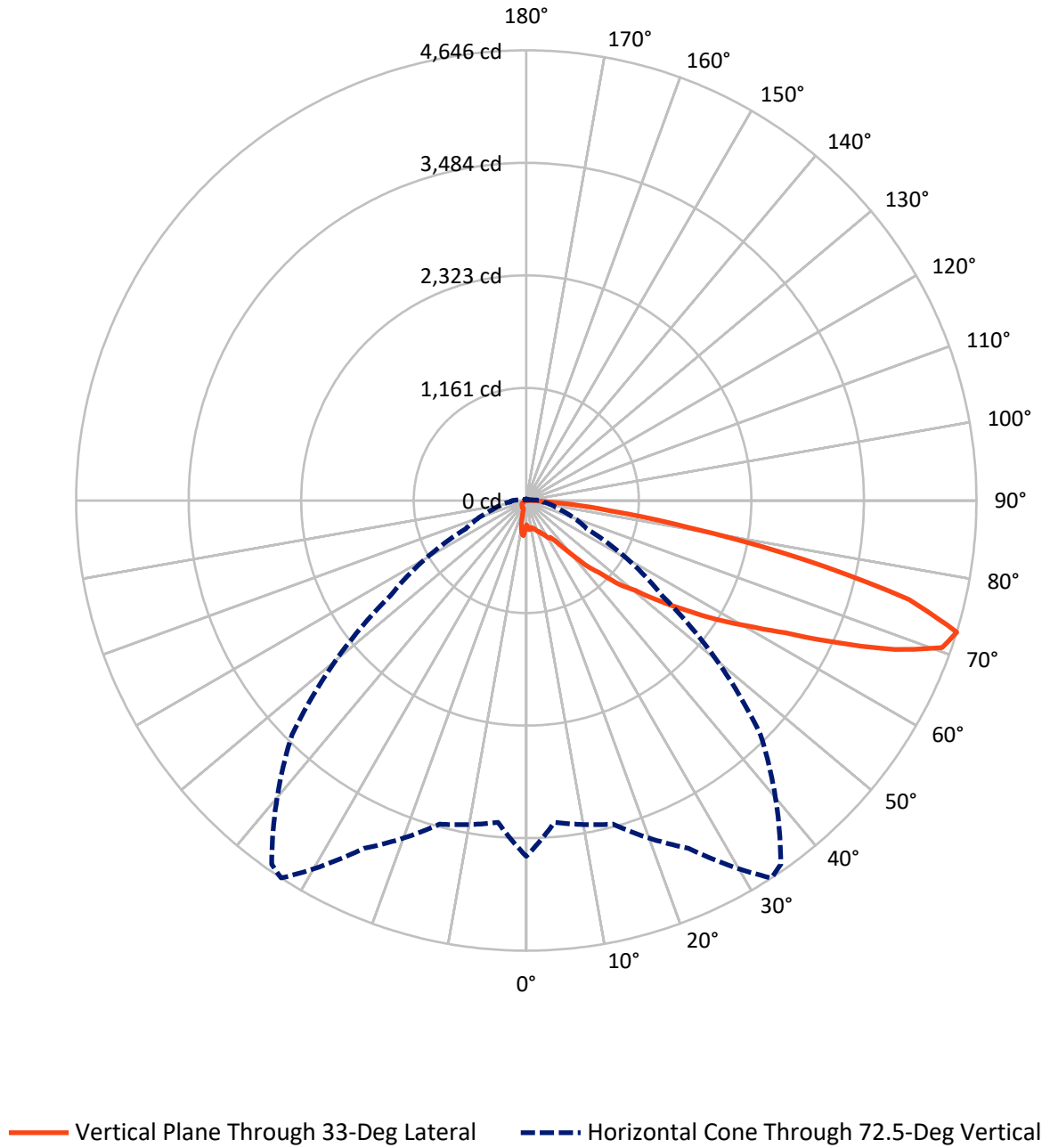
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.3 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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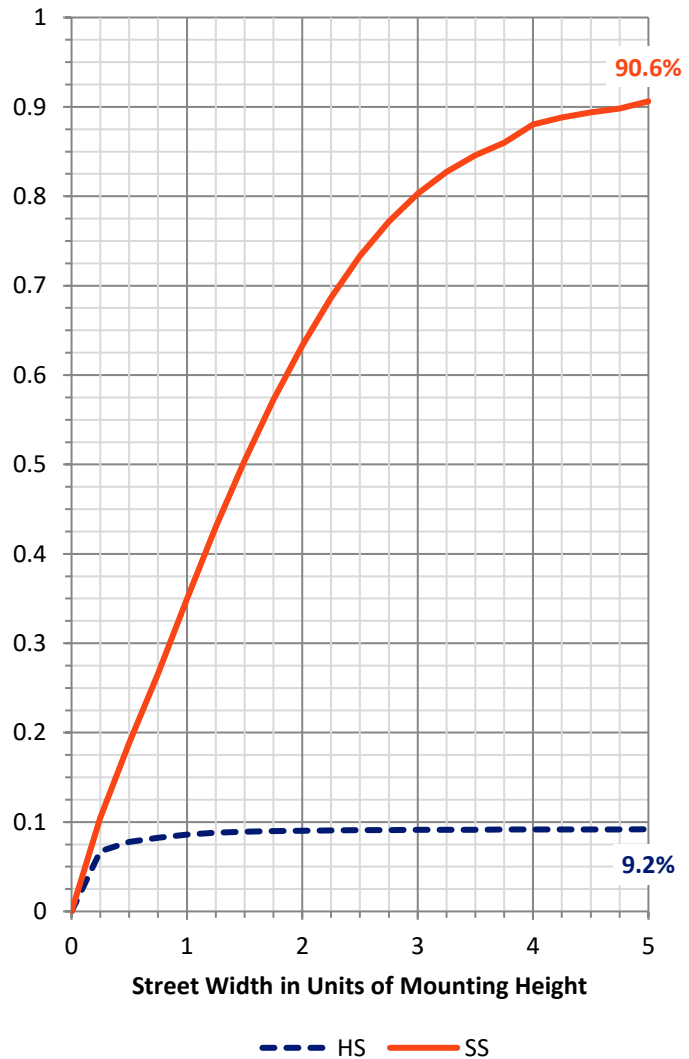
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	434.3	0.0	434.3
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	4262.7	0.0	4262.7
	% Fixture	90.8	0.0	90.8
Total	Lumens	4697.0	0.0	4697.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.3	0.7
10°-20°	96.4	2.1
20°-30°	163.4	3.5
30°-40°	299.1	6.4
40°-50°	631.2	13.4
50°-60°	1056.0	22.5
60°-70°	1413.5	30.1
70°-80°	923.3	19.7
80°-90°	81.9	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°	4697.0	100.0
0°-180°	4697.0	100.0

Coefficient of Utilization

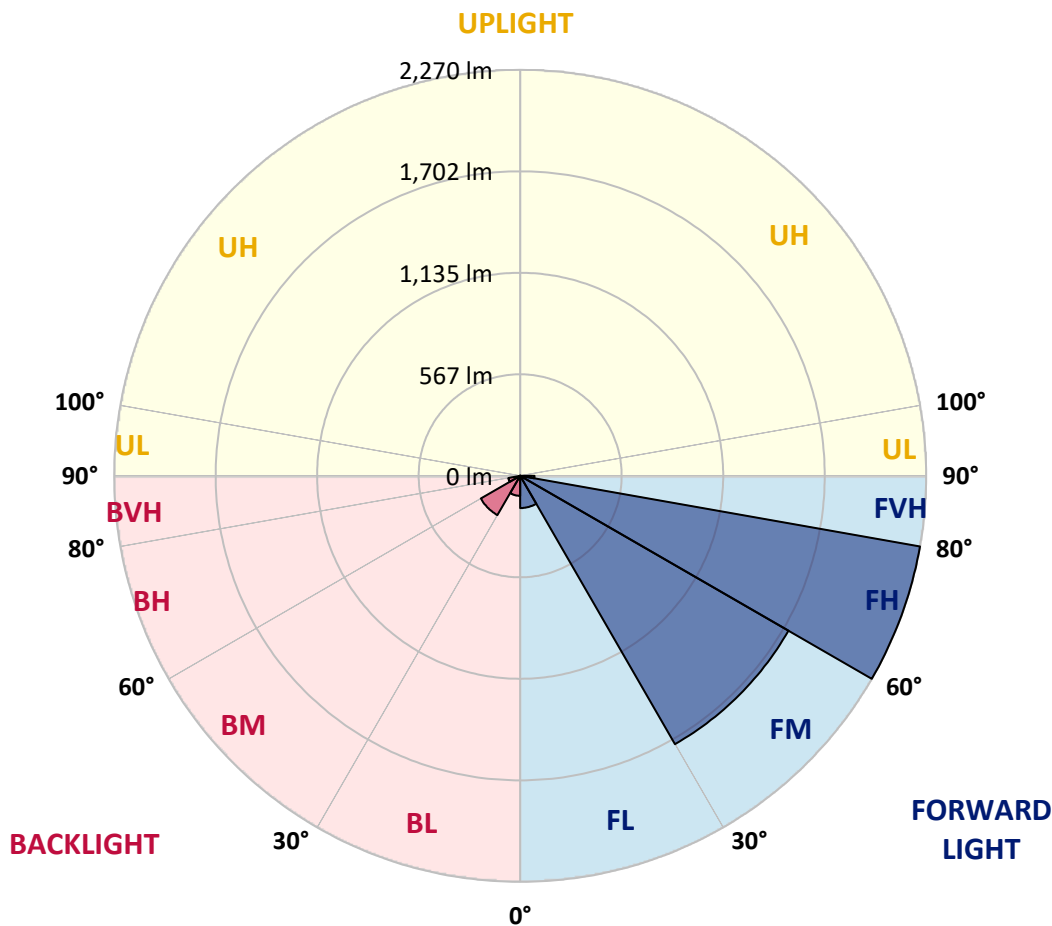


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	180.3	3.8			
FM (30°-60°)	1732.3	36.9			
FH (60°-80°)	2269.8	48.3			G2/5000
FVH (80°-90°)	80.3	1.7			G1/100
BL (0°-30°)	111.8	2.4	B1/500		
BM (30°-60°)	253.9	5.4	B1/1000		
BH (60°-80°)	67.0	1.4	B0/110		G0/110
BVH (80°-90°)	1.6	0.0			G0/10
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°	33°	35°	45°	55°	65°	75°	85°
0°	249.8	249.8	249.8	249.8	249.8	249.8	249.8	249.8	249.8	249.8	249.8
2.5°	297.8	286.3	269.6	270.7	273.6	275.9	282.2	279.6	274.6	274.3	297.8
5°	315.5	302.8	301.7	303.3	302.5	306.7	301.5	318.4	332.8	350.0	377.6
7.5°	306.9	300.9	293.4	301.2	300.9	298.9	302.2	336.7	371.3	393.3	438.9
10°	282.2	275.4	281.1	283.7	281.9	291.0	313.7	341.9	383.3	429.2	451.4
12.5°	275.1	279.3	281.4	281.4	298.9	303.5	338.2	364.8	414.1	450.4	514.8
15°	302.5	310.6	296.2	293.1	298.6	301.2	339.8	371.9	435.0	501.2	555.2
17.5°	346.1	345.5	323.4	311.1	319.7	326.0	347.4	384.9	421.9	541.1	619.3
20°	376.0	376.6	336.7	311.1	339.5	343.2	366.9	396.9	426.1	561.2	661.3
22.5°	414.6	400.8	356.7	332.0	351.3	354.7	380.7	404.5	447.5	558.8	715.1
25°	446.2	437.3	381.8	364.6	381.8	377.1	400.8	436.5	470.4	596.1	746.6
27.5°	495.2	480.1	399.5	402.6	401.6	405.0	410.5	465.2	510.9	598.0	819.6
30°	540.9	532.0	439.2	439.2	449.3	442.8	446.7	513.0	550.0	640.2	901.8
32.5°	588.1	588.6	485.8	461.1	453.0	479.8	506.2	536.2	597.2	712.7	1027.5
35°	713.0	702.5	575.3	513.5	507.0	505.4	547.6	628.7	680.9	807.1	1196.7
37.5°	964.6	928.4	767.7	632.4	607.9	599.5	647.5	730.7	782.6	945.8	1476.5
40°	1222.8	1156.3	977.9	825.4	745.8	709.8	765.6	836.3	928.6	1099.2	1735.5
42.5°	1449.4	1367.3	1136.2	1033.5	929.9	914.3	861.9	976.9	1137.3	1322.4	1989.2
45°	1670.3	1508.6	1277.0	1195.7	1070.0	1078.8	1061.1	1160.7	1354.0	1567.0	2214.3
47.5°	1822.3	1677.1	1449.7	1344.1	1293.7	1241.8	1382.6	1486.2	1546.9	1722.4	2408.8
50°	1986.1	1839.0	1598.1	1524.3	1458.0	1510.4	1693.2	1707.1	1702.1	1867.4	2541.3
52.5°	2197.6	2024.2	1768.3	1684.9	1722.4	1774.6	1985.6	1988.2	1840.1	1989.5	2636.7
55°	2393.2	2201.0	1995.2	1916.5	1995.0	2039.0	2272.9	2187.1	1920.4	2072.4	2683.7
57.5°	2668.8	2446.4	2296.9	2158.2	2317.3	2275.0	2525.6	2398.1	2010.6	2127.4	2666.5
60°	3017.2	2755.4	2605.7	2458.9	2629.4	2658.1	2772.3	2503.5	2045.5	2145.4	2562.9
62.5°	3371.6	3108.2	2911.3	2811.7	3005.2	3099.6	3000.8	2555.9	2003.6	2110.2	2328.5
65°	3811.3	3474.1	3244.1	3185.7	3544.2	3683.0	3270.9	2568.7	1922.5	1916.5	1872.1
67.5°	4112.5	3784.2	3573.2	3671.0	4104.1	4115.3	3513.5	2572.6	1649.4	1500.5	1228.8
70°	4183.9	3832.4	3738.0	4025.9	4550.8	4409.8	3591.7	2374.4	1223.3	890.6	561.7
72.5°	3672.8	3334.3	3457.1	3958.9	4645.8	4581.1	3418.8	1713.1	688.7	356.2	172.4
75°	2252.9	2048.2	2593.4	3356.5	4078.1	4036.3	2667.2	885.1	277.5	142.4	64.4
77.5°	979.7	909.9	1353.4	2227.0	2930.4	2893.1	1562.8	326.0	143.4	100.1	32.6
80°	324.1	314.5	512.7	1054.6	1716.4	1683.6	658.5	135.6	102.2	80.3	18.3
82.5°	76.9	76.4	178.9	485.3	874.4	847.0	202.1	74.8	74.1	63.4	9.6
85°	19.3	19.8	49.5	198.5	355.2	313.2	52.7	37.3	52.2	43.0	5.0
87.5°	0.0	0.0	12.8	28.4	53.7	33.6	5.7	9.9	14.6	15.4	2.6
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°	249.8	249.8	249.8	249.8	249.8	249.8	249.8	249.8	249.8	249.8	249.8
2.5°	303.0	300.2	276.7	282.4	291.3	290.5	296.2	291.8	287.9	307.2	305.4
5°	385.4	369.8	362.5	372.7	367.2	354.4	365.1	363.3	360.1	366.7	371.6
7.5°	447.2	432.9	426.4	405.0	374.0	349.4	353.4	344.2	335.6	345.8	356.2
10°	467.6	459.8	459.0	417.2	388.0	352.6	310.6	274.3	264.7	251.9	257.6
12.5°	522.9	527.6	498.1	449.3	393.0	324.9	250.3	199.0	178.1	164.6	165.3
15°	568.2	584.7	541.9	454.3	345.8	247.7	166.6	120.5	107.4	104.1	103.0
17.5°	635.8	651.7	555.5	419.1	278.8	167.9	107.2	93.9	94.7	97.0	96.5
20°	685.8	683.5	543.7	356.7	205.5	110.0	89.7	87.9	92.1	98.8	97.3
22.5°	734.1	717.9	536.4	299.1	133.0	88.4	86.6	86.3	90.2	96.7	98.6
25°	768.5	771.1	524.2	234.2	96.7	82.1	83.7	86.1	90.0	97.0	96.0
27.5°	867.1	794.1	473.1	170.0	81.6	78.8	82.7	87.4	88.7	97.5	97.8
30°	931.0	880.6	439.7	114.5	75.4	72.8	80.6	86.8	88.4	99.9	100.7
32.5°	1042.3	917.9	401.1	85.0	70.1	70.9	75.9	84.2	91.5	103.8	104.3
35°	1180.8	1037.6	331.2	76.4	68.3	67.0	69.4	79.0	91.0	104.3	106.9
37.5°	1444.5	1109.4	262.6	74.1	68.3	66.0	68.3	74.1	89.4	109.5	115.0
40°	1621.0	1255.4	189.3	73.5	67.0	64.9	65.7	71.5	85.0	106.4	114.5
42.5°	1838.5	1316.9	139.5	72.2	65.7	62.6	63.1	70.4	80.6	99.9	105.9
45°	2016.6	1361.8	109.8	71.7	62.6	61.5	62.6	69.6	76.4	85.8	91.3
47.5°	2151.9	1413.9	88.1	68.3	61.8	61.5	60.2	65.2	69.4	71.7	75.4
50°	2251.0	1402.2	73.0	63.1	59.2	60.8	58.4	59.2	60.2	58.9	63.1
52.5°	2311.8	1360.0	60.8	56.8	56.1	57.4	54.5	52.2	50.3	49.3	51.9
55°	2334.0	1275.2	51.6	48.8	50.6	51.1	48.8	44.6	41.5	39.9	42.0
57.5°	2292.0	1146.1	44.9	40.4	44.6	44.6	41.5	37.0	33.4	30.8	32.9
60°	2185.6	1003.5	39.9	33.6	38.1	38.3	34.7	30.0	27.1	24.5	25.8
62.5°	1987.4	848.1	34.9	29.2	32.9	33.1	28.7	24.3	22.2	19.3	20.3
65°	1591.0	648.6	29.7	25.8	28.4	27.6	23.7	20.6	18.0	15.4	15.9
67.5°	1032.7	400.3	25.8	23.5	24.0	23.2	20.1	18.0	15.1	13.0	13.3
70°	462.4	172.4	22.7	21.1	20.9	19.6	17.0	16.7	14.9	13.0	13.0
72.5°	142.6	64.9	19.6	19.0	18.0	16.4	14.9	15.9	14.6	12.5	12.3
75°	56.3	29.7	16.2	16.2	15.6	13.6	13.3	14.3	13.6	11.5	11.0
77.5°	29.5	18.8	13.3	13.8	13.6	10.4	12.0	13.0	12.5	9.6	8.1
80°	17.5	11.5	9.9	11.2	11.0	7.3	9.1	8.3	6.0	2.9	0.8
82.5°	9.6	5.2	4.4	6.5	6.5	2.6	4.7	4.2	2.3	0.0	0.0
85°	4.7	3.7	3.4	3.7	2.6	0.8	2.3	2.3	1.3	0.0	0.0
87.5°	2.3	2.1	1.6	1.3	1.0	0.0	0.8	1.0	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)