

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: P367101

Luminaire Tested: **MSA-SA1D-760-U-T4FT-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367101
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-SA1D-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: 5135 lumens
Efficiency: N/A
Efficacy: 76.6 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

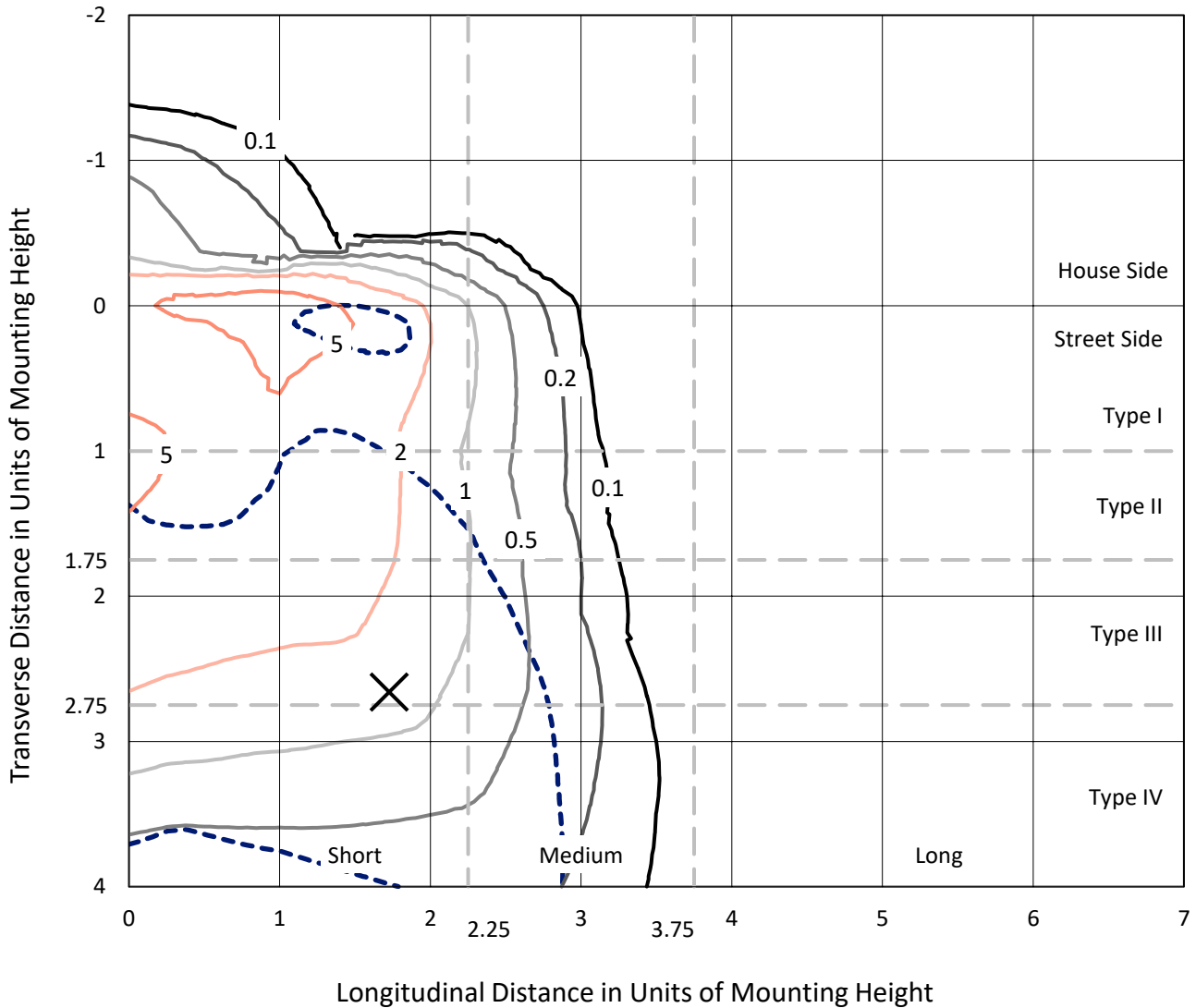
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

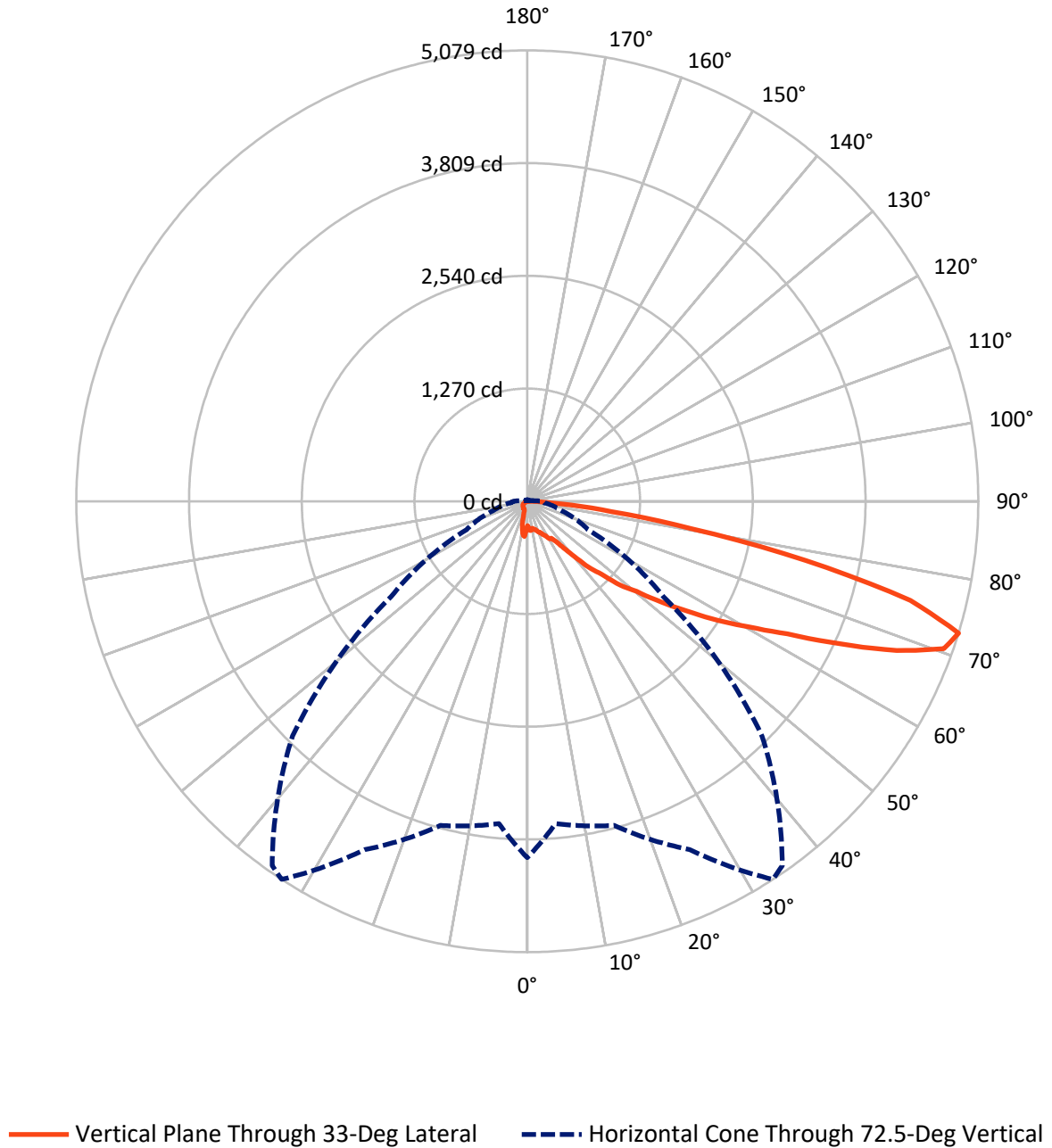
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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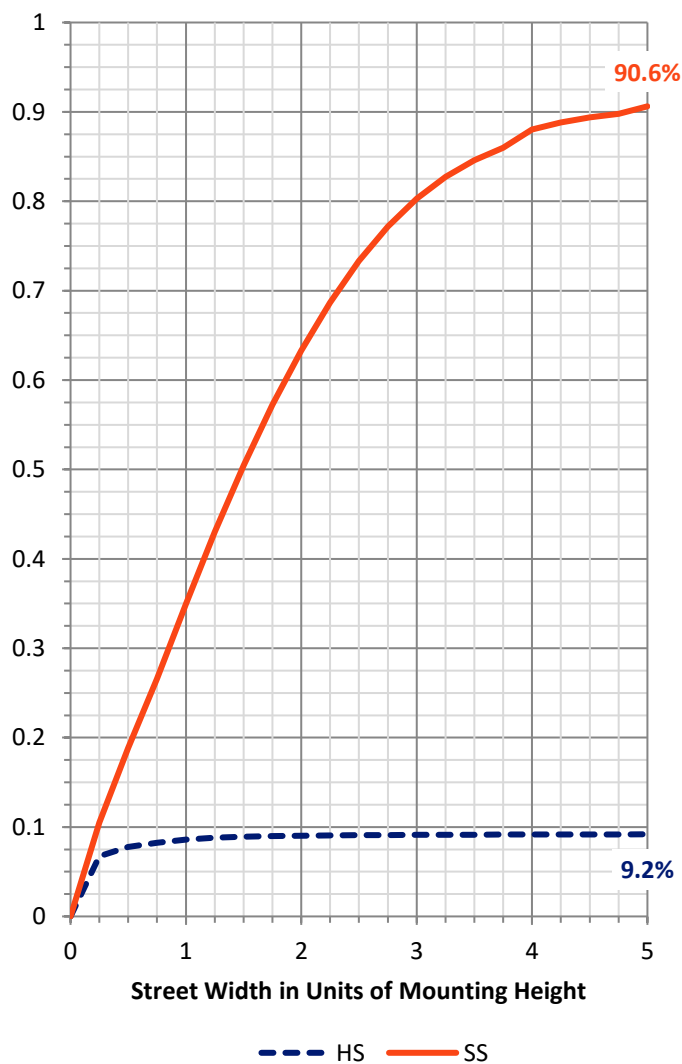
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	474.8	0.0	474.8
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	4660.2	0.0	4660.2
	% Fixture	90.8	0.0	90.8
Total	Lumens	5135.0	0.0	5135.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.4	0.7
10°-20°	105.3	2.1
20°-30°	178.6	3.5
30°-40°	326.9	6.4
40°-50°	690.0	13.4
50°-60°	1154.5	22.5
60°-70°	1545.3	30.1
70°-80°	1009.4	19.7
80°-90°	89.5	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°	5135.0	100.0
0°-180°	5135.0	100.0

Coefficient of Utilization

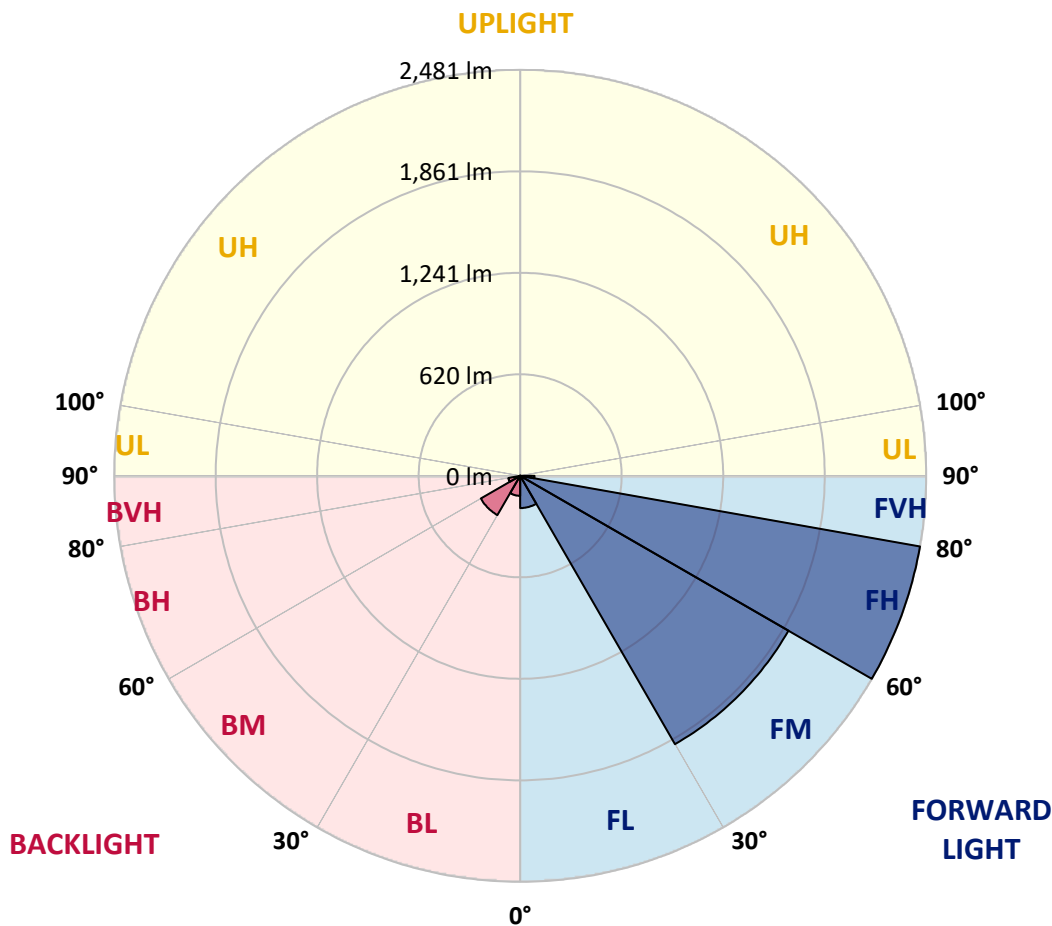


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	197.1	3.8			
FM (30°-60°)	1893.9	36.9			
FH (60°-80°)	2481.4	48.3			G2/5000
FVH (80°-90°)	87.8	1.7			G1/100
BL (0°-30°)	122.2	2.4	B1/500		
BM (30°-60°)	277.6	5.4	B1/1000		
BH (60°-80°)	73.3	1.4	B0/110		G0/110
BVH (80°-90°)	1.7	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°	273.1	273.1	273.1	273.1	273.1	273.1	273.1	273.1	273.1	273.1	273.1
2.5°	325.6	313.0	294.8	295.9	299.1	301.6	308.5	305.6	300.2	299.9	325.6
5°	345.0	331.0	329.9	331.6	330.7	335.3	329.6	348.1	363.8	382.6	412.8
7.5°	335.6	329.0	320.7	329.3	329.0	326.7	330.4	368.1	406.0	429.9	479.8
10°	308.5	301.1	307.3	310.2	308.2	318.2	343.0	373.8	419.1	469.3	493.5
12.5°	300.8	305.3	307.6	307.6	326.7	331.9	369.8	398.8	452.7	492.4	562.8
15°	330.7	339.5	323.9	320.4	326.4	329.3	371.5	406.5	475.5	548.0	607.0
17.5°	378.3	377.8	353.5	340.1	349.5	356.4	379.7	420.8	461.3	591.6	677.1
20°	411.1	411.7	368.1	340.1	371.2	375.2	401.1	433.9	465.8	613.5	723.0
22.5°	453.3	438.2	390.0	362.9	384.0	387.7	416.2	442.2	489.2	611.0	781.7
25°	487.8	478.1	417.4	398.6	417.4	412.2	438.2	477.3	514.3	651.7	816.2
27.5°	541.4	524.9	436.8	440.2	439.0	442.8	448.7	508.6	558.5	653.7	896.1
30°	591.3	581.6	480.1	480.1	491.2	484.1	488.4	560.8	601.3	699.9	985.9
32.5°	642.9	643.5	531.1	504.1	495.2	524.6	553.4	586.2	652.9	779.2	1123.3
35°	779.5	768.0	628.9	561.4	554.2	552.5	598.7	687.4	744.4	882.4	1308.3
37.5°	1054.6	1014.9	839.3	691.4	664.6	655.4	707.9	798.8	855.6	1034.0	1614.2
40°	1336.8	1264.1	1069.1	902.3	815.4	776.0	837.0	914.3	1015.2	1201.7	1897.3
42.5°	1584.6	1494.8	1242.2	1129.8	1016.7	999.5	942.2	1068.0	1243.3	1445.7	2174.7
45°	1826.0	1649.3	1396.1	1307.2	1169.8	1179.4	1160.1	1269.0	1480.2	1713.1	2420.8
47.5°	1992.3	1833.5	1584.9	1469.4	1414.4	1357.6	1511.6	1624.8	1691.2	1883.1	2633.4
50°	2171.3	2010.5	1747.1	1666.4	1594.0	1651.3	1851.1	1866.2	1860.8	2041.6	2778.3
52.5°	2402.5	2212.9	1933.2	1842.0	1883.1	1940.1	2170.7	2173.6	2011.6	2175.0	2882.6
55°	2616.3	2406.2	2181.3	2095.2	2181.0	2229.2	2484.9	2391.1	2099.4	2265.7	2933.9
57.5°	2917.7	2674.5	2511.1	2359.5	2533.4	2487.2	2761.2	2621.7	2198.1	2325.8	2915.1
60°	3298.6	3012.3	2848.7	2688.2	2874.6	2906.0	3030.9	2736.9	2236.3	2345.5	2801.9
62.5°	3686.0	3398.1	3182.8	3073.9	3285.5	3388.7	3280.6	2794.2	2190.4	2307.0	2545.6
65°	4166.7	3798.1	3546.6	3482.7	3874.7	4026.4	3576.0	2808.2	2101.7	2095.2	2046.7
67.5°	4496.0	4137.0	3906.4	4013.3	4486.8	4499.1	3841.1	2812.5	1803.2	1640.4	1343.4
70°	4574.1	4189.8	4086.6	4401.3	4975.2	4821.0	3926.6	2595.8	1337.4	973.6	614.1
72.5°	4015.3	3645.2	3779.5	4328.0	5079.0	5008.3	3737.6	1872.8	752.9	389.4	188.4
75°	2462.9	2239.1	2835.3	3669.5	4458.3	4412.7	2916.0	967.6	303.3	155.7	70.4
77.5°	1071.1	994.7	1479.7	2434.7	3203.6	3162.9	1708.6	356.4	156.8	109.5	35.6
80°	354.4	343.8	560.5	1152.9	1876.5	1840.6	719.9	148.3	111.8	87.8	20.0
82.5°	84.1	83.5	195.6	530.6	955.9	926.0	220.9	81.8	81.0	69.3	10.5
85°	21.1	21.7	54.2	217.0	388.3	342.4	57.6	40.8	57.0	47.0	5.4
87.5°	0.0	0.0	14.0	31.1	58.7	36.8	6.3	10.8	16.0	16.8	2.9
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°	273.1	273.1	273.1	273.1	273.1	273.1	273.1	273.1	273.1	273.1	273.1
2.5°	331.3	328.1	302.5	308.8	318.5	317.6	323.9	319.0	314.7	335.8	333.8
5°	421.4	404.3	396.3	407.4	401.4	387.4	399.1	397.1	393.7	400.8	406.3
7.5°	488.9	473.3	466.1	442.8	408.8	382.0	386.3	376.3	366.9	378.0	389.4
10°	511.2	502.6	501.8	456.2	424.2	385.5	339.5	299.9	289.4	275.4	281.7
12.5°	571.6	576.8	544.5	491.2	429.6	355.2	273.7	217.5	194.7	179.9	180.8
15°	621.2	639.2	592.4	496.6	378.0	270.8	182.2	131.7	117.5	113.8	112.6
17.5°	695.1	712.5	607.3	458.1	304.8	183.6	117.2	102.6	103.5	106.1	105.5
20°	749.8	747.2	594.4	390.0	224.7	120.3	98.1	96.1	100.6	108.1	106.3
22.5°	802.5	784.9	586.4	327.0	145.4	96.6	94.7	94.4	98.6	105.8	107.8
25°	840.2	843.0	573.0	256.0	105.8	89.8	91.5	94.1	98.4	106.1	104.9
27.5°	947.9	868.1	517.2	185.9	89.2	86.1	90.4	95.5	96.9	106.6	106.9
30°	1017.8	962.8	480.7	125.2	82.4	79.5	88.1	94.9	96.6	109.2	110.0
32.5°	1139.5	1003.5	438.5	92.9	76.7	77.5	83.0	92.1	100.1	113.5	114.0
35°	1290.9	1134.4	362.1	83.5	74.7	73.3	75.8	86.4	99.5	114.0	116.9
37.5°	1579.1	1212.8	287.1	81.0	74.7	72.1	74.7	81.0	97.8	119.7	125.7
40°	1772.2	1372.5	207.0	80.4	73.3	71.0	71.8	78.1	92.9	116.3	125.2
42.5°	2009.9	1439.7	152.5	79.0	71.8	68.4	69.0	77.0	88.1	109.2	115.7
45°	2204.7	1488.8	120.0	78.4	68.4	67.3	68.4	76.1	83.5	93.8	99.8
47.5°	2352.6	1545.8	96.4	74.7	67.6	67.3	65.9	71.3	75.8	78.4	82.4
50°	2461.0	1533.0	79.8	69.0	64.7	66.4	63.9	64.7	65.9	64.4	69.0
52.5°	2527.4	1486.8	66.4	62.2	61.3	62.7	59.6	57.0	55.0	53.9	56.7
55°	2551.6	1394.1	56.4	53.3	55.3	55.9	53.3	48.8	45.3	43.6	45.9
57.5°	2505.7	1253.0	49.0	44.2	48.8	48.8	45.3	40.5	36.5	33.6	35.9
60°	2389.4	1097.1	43.6	36.8	41.6	41.9	37.9	32.8	29.7	26.8	28.2
62.5°	2172.7	927.1	38.2	31.9	35.9	36.2	31.4	26.5	24.2	21.1	22.2
65°	1739.4	709.0	32.5	28.2	31.1	30.2	25.9	22.5	19.7	16.8	17.4
67.5°	1129.0	437.6	28.2	25.7	26.2	25.4	22.0	19.7	16.5	14.3	14.5
70°	505.5	188.4	24.8	23.1	22.8	21.4	18.5	18.2	16.3	14.3	14.3
72.5°	155.9	71.0	21.4	20.8	19.7	18.0	16.3	17.4	16.0	13.7	13.4
75°	61.6	32.5	17.7	17.7	17.1	14.8	14.5	15.7	14.8	12.5	12.0
77.5°	32.2	20.5	14.5	15.1	14.8	11.4	13.1	14.3	13.7	10.5	8.8
80°	19.1	12.5	10.8	12.3	12.0	8.0	10.0	9.1	6.6	3.1	0.9
82.5°	10.5	5.7	4.8	7.1	7.1	2.9	5.1	4.6	2.6	0.0	0.0
85°	5.1	4.0	3.7	4.0	2.9	0.9	2.6	2.6	1.4	0.0	0.0
87.5°	2.6	2.3	1.7	1.4	1.1	0.0	0.9	1.1	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)