

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: P367497

Luminaire Tested: **MSA-SA2C-760-U-T4FT-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367497
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-SA2C-760-U-T4FT-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 9238 lumens
Efficiency: N/A
Efficacy: 81.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

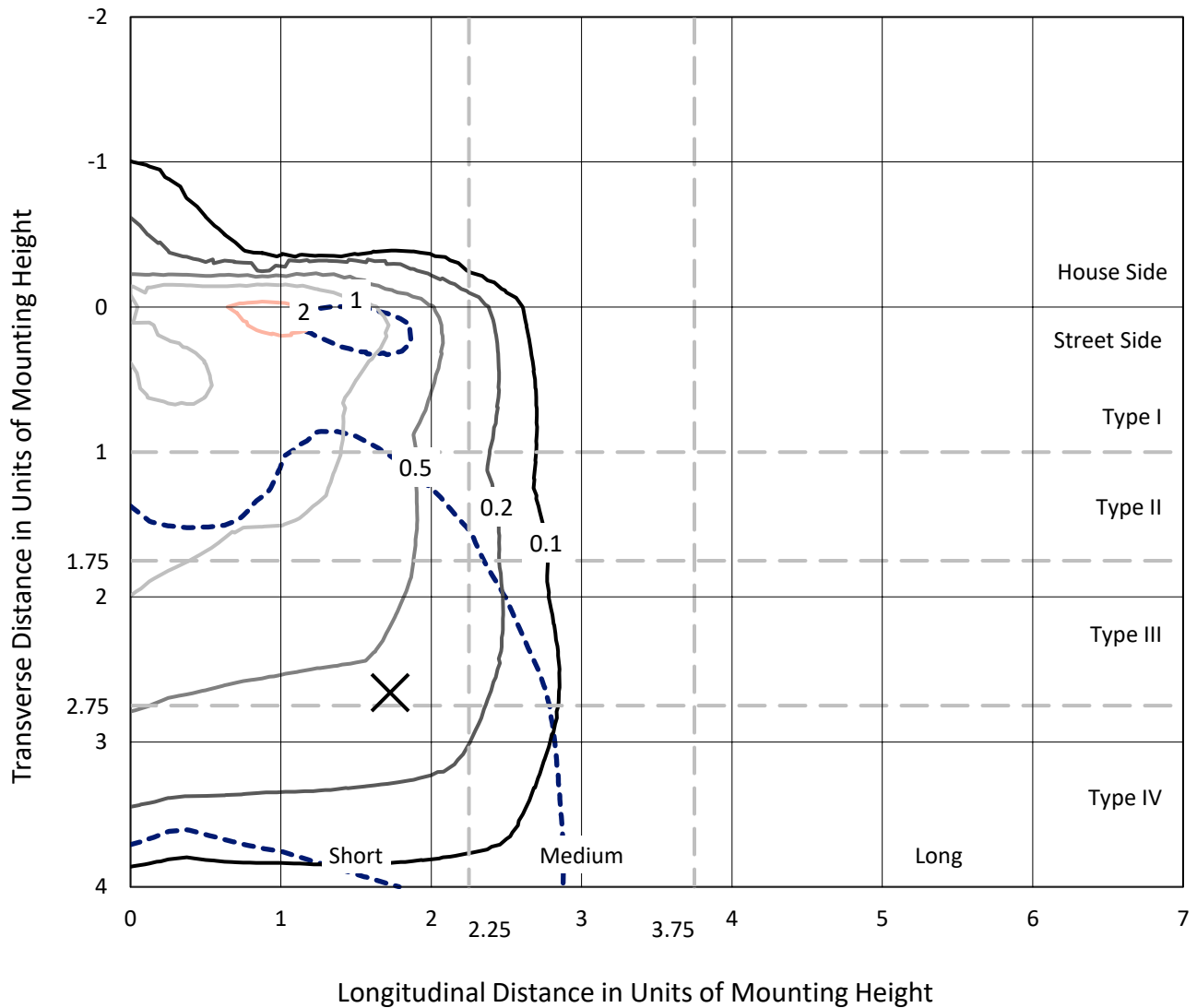
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

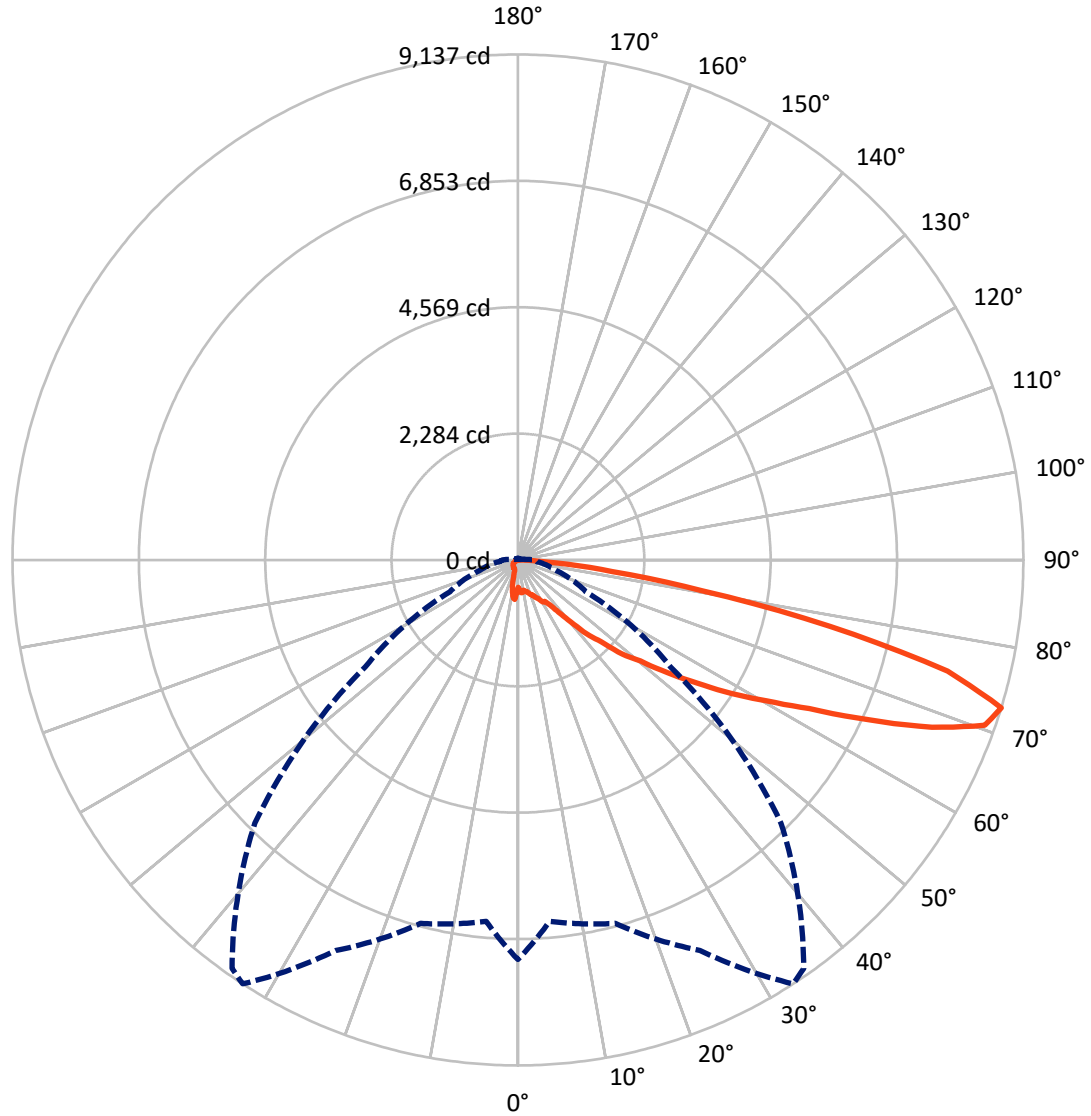
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.3 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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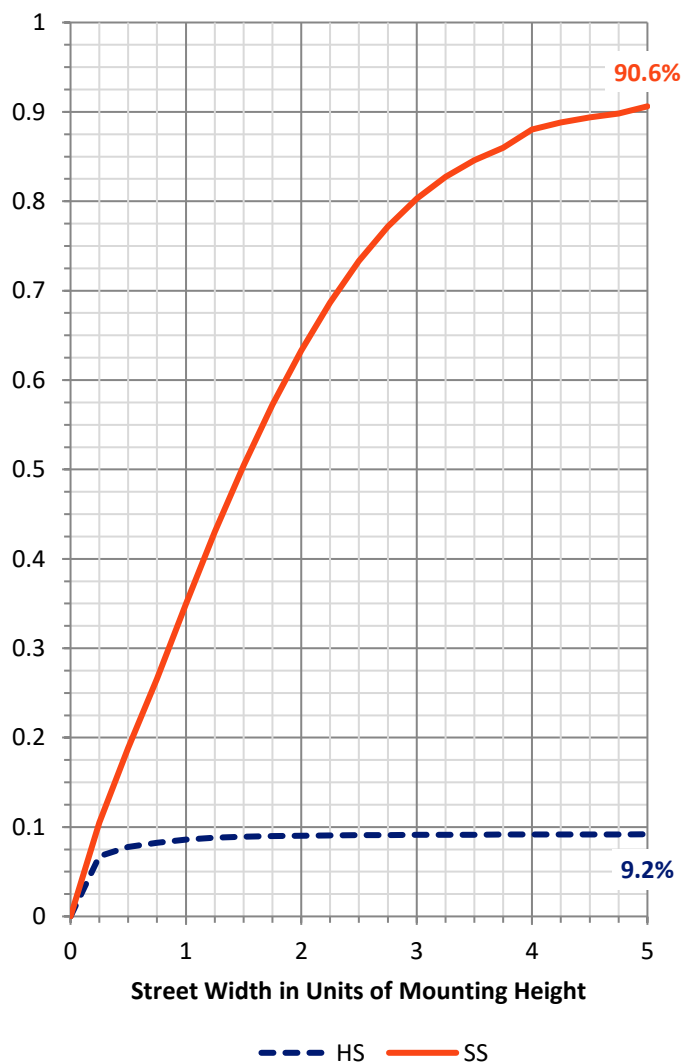
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	854.2	0.0	854.2
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	8383.8	0.0	8383.8
	% Fixture	90.8	0.0	90.8
Total	Lumens	9238.0	0.0	9238.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.6	0.7
10°-20°	189.5	2.1
20°-30°	321.4	3.5
30°-40°	588.2	6.4
40°-50°	1241.4	13.4
50°-60°	2076.9	22.5
60°-70°	2780.1	30.1
70°-80°	1816.0	19.7
80°-90°	161.0	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°	9238.0	100.0
0°-180°	9238.0	100.0

Coefficient of Utilization



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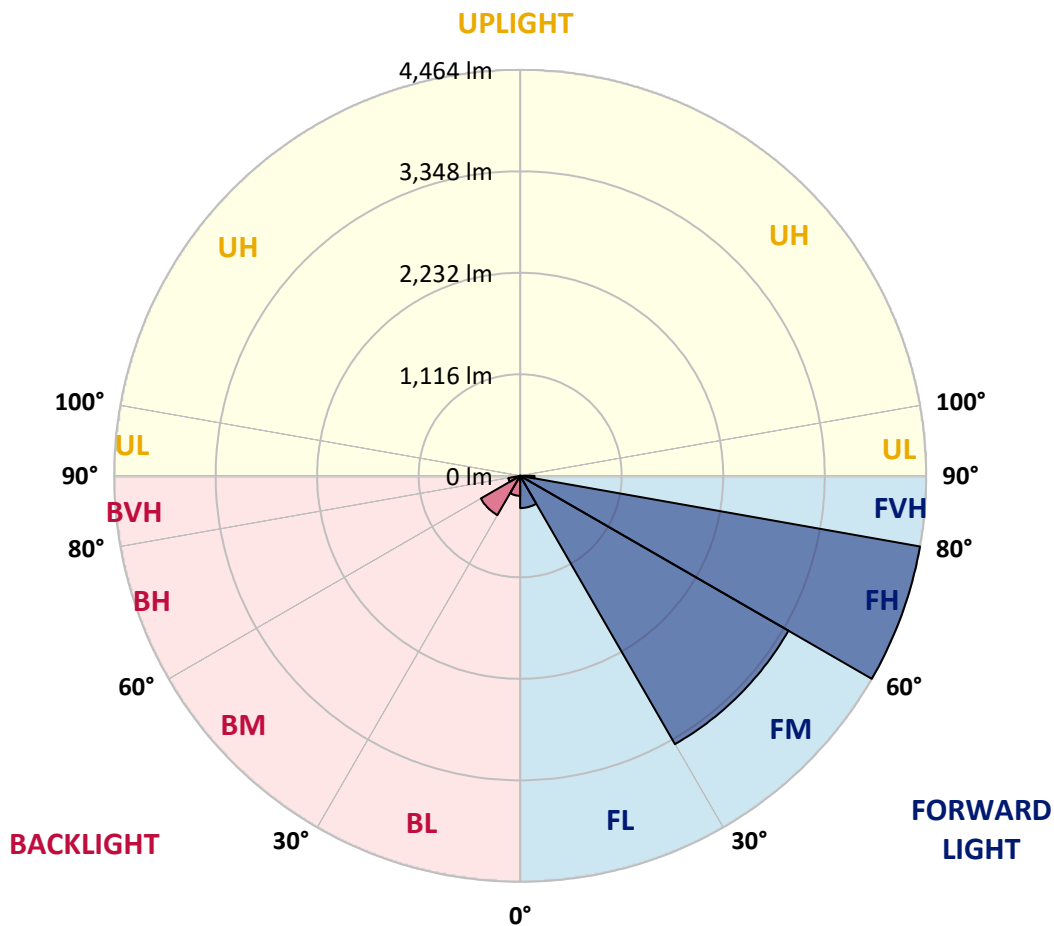
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	354.6	3.8			
FM (30°-60°)	3407.1	36.9			
FH (60°-80°)	4464.2	48.3			G2/5000
FVH (80°-90°)	157.9	1.7			G2/225
BL (0°-30°)	219.9	2.4	B1/500		
BM (30°-60°)	499.4	5.4	B1/1000		
BH (60°-80°)	131.8	1.4	B1/500		G1/500
BVH (80°-90°)	3.1	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°	491.4	491.4	491.4	491.4	491.4	491.4	491.4	491.4	491.4	491.4	491.4
2.5°	585.7	563.2	530.3	532.4	538.0	542.6	555.0	549.8	540.1	539.6	585.7
5°	620.6	595.5	593.4	596.5	595.0	603.2	592.9	626.2	654.5	688.3	742.7
7.5°	603.7	591.9	577.0	592.4	591.9	587.8	594.4	662.1	730.4	773.4	863.2
10°	555.0	541.6	552.9	558.0	554.4	572.4	617.0	672.4	754.0	844.2	887.8
12.5°	541.1	549.3	553.4	553.4	587.8	597.0	665.2	717.5	814.5	885.8	1012.5
15°	595.0	610.9	582.6	576.5	587.3	592.4	668.3	731.4	855.5	985.8	1092.0
17.5°	680.6	679.6	636.0	611.9	628.8	641.1	683.2	757.0	829.9	1064.3	1218.1
20°	739.6	740.6	662.1	611.9	667.8	675.0	721.6	780.6	838.1	1103.8	1300.7
22.5°	815.5	788.3	701.6	652.9	690.9	697.5	748.8	795.5	880.1	1099.1	1406.4
25°	877.6	860.1	750.9	717.0	750.9	741.6	788.3	858.6	925.3	1172.5	1468.4
27.5°	974.0	944.2	785.8	791.9	789.9	796.5	807.3	915.0	1004.8	1176.1	1612.0
30°	1063.7	1046.3	863.7	863.7	883.7	870.9	878.6	1008.9	1081.7	1259.2	1773.6
32.5°	1156.6	1157.6	955.5	906.8	890.9	943.7	995.5	1054.5	1174.5	1401.7	2020.8
35°	1402.3	1381.7	1131.4	1009.9	997.1	994.0	1077.1	1236.6	1339.2	1587.4	2353.7
37.5°	1897.2	1825.9	1510.0	1243.8	1195.6	1179.1	1273.5	1437.1	1539.2	1860.3	2904.0
40°	2405.0	2274.2	1923.4	1623.3	1466.9	1396.1	1505.9	1644.9	1826.4	2161.9	3413.3
42.5°	2850.7	2689.1	2234.7	2032.6	1829.0	1798.2	1695.1	1921.3	2236.7	2600.9	3912.4
45°	3285.1	2967.1	2511.7	2351.6	2104.4	2121.9	2087.0	2282.9	2663.0	3082.0	4355.0
47.5°	3584.1	3298.4	2851.2	2643.5	2544.5	2442.4	2719.4	2923.0	3042.5	3387.7	4737.6
50°	3906.2	3616.9	3143.0	2997.9	2867.6	2970.7	3330.2	3357.4	3347.7	3672.8	4998.2
52.5°	4322.2	3981.1	3477.9	3313.8	3387.7	3490.3	3905.2	3910.3	3619.0	3912.9	5185.9
55°	4706.8	4328.8	3924.2	3769.3	3923.7	4010.3	4470.4	4301.7	3777.0	4076.0	5278.2
57.5°	5249.0	4811.5	4517.6	4244.7	4557.6	4474.5	4967.4	4716.6	3954.4	4184.2	5244.4
60°	5934.2	5419.3	5124.9	4836.1	5171.5	5227.9	5452.6	4923.8	4023.2	4219.6	5040.7
62.5°	6631.2	6113.2	5726.0	5530.0	5910.6	6096.3	5901.9	5026.9	3940.6	4150.4	4579.6
65°	7496.0	6832.8	6380.4	6265.5	6970.8	7243.6	6433.3	5052.0	3781.1	3769.3	3682.1
67.5°	8088.4	7442.6	7027.7	7220.0	8072.0	8094.0	6910.2	5059.7	3244.1	2951.2	2416.8
70°	8228.9	7537.5	7351.9	7918.1	8950.5	8673.1	7064.1	4669.9	2406.0	1751.5	1104.8
72.5°	7223.6	6557.9	6799.5	7786.3	9137.2	9010.0	6724.1	3369.2	1354.6	700.6	339.0
75°	4430.9	4028.3	5100.8	6601.5	8020.7	7938.6	5245.9	1740.8	545.7	280.0	126.7
77.5°	1927.0	1789.5	2661.9	4380.1	5763.4	5690.1	3073.8	641.1	282.1	197.0	64.1
80°	637.5	618.6	1008.4	2074.2	3375.9	3311.3	1295.1	266.7	201.1	158.0	35.9
82.5°	151.3	150.3	351.8	954.5	1719.7	1665.9	397.5	147.2	145.7	124.6	19.0
85°	38.0	39.0	97.5	390.3	698.6	616.0	103.6	73.3	102.6	84.6	9.7
87.5°	0.0	0.0	25.1	55.9	105.7	66.2	11.3	19.5	28.7	30.3	5.1
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°	491.4	491.4	491.4	491.4	491.4	491.4	491.4	491.4	491.4	491.4	491.4
2.5°	596.0	590.3	544.2	555.5	572.9	571.4	582.6	573.9	566.2	604.2	600.6
5°	758.1	727.3	712.9	732.9	722.2	697.0	718.1	714.5	708.3	721.1	730.9
7.5°	879.6	851.4	838.6	796.5	735.5	687.3	695.0	677.0	660.1	680.1	700.6
10°	919.6	904.2	902.7	820.6	763.2	693.4	610.9	539.6	520.6	495.5	506.7
12.5°	1028.4	1037.6	979.6	883.7	772.9	639.1	492.4	391.3	350.3	323.6	325.2
15°	1117.6	1149.9	1065.8	893.5	680.1	487.3	327.7	237.0	211.3	204.6	202.6
17.5°	1250.4	1281.7	1092.5	824.2	548.3	330.3	210.8	184.6	186.2	190.8	189.8
20°	1348.9	1344.3	1069.4	701.6	404.2	216.4	176.4	172.8	181.1	194.4	191.3
22.5°	1443.8	1412.0	1055.0	588.3	261.6	173.9	170.3	169.8	177.5	190.3	193.9
25°	1511.5	1516.6	1030.9	460.6	190.3	161.6	164.6	169.3	176.9	190.8	188.7
27.5°	1705.4	1561.8	930.4	334.4	160.5	154.9	162.6	171.8	174.4	191.8	192.3
30°	1831.0	1732.0	864.7	225.2	148.2	143.1	158.5	170.8	173.9	196.4	198.0
32.5°	2050.0	1805.4	788.8	167.2	138.0	139.5	149.3	165.7	180.0	204.1	205.2
35°	2322.4	2040.8	651.4	150.3	134.4	131.8	136.4	155.4	179.0	205.2	210.3
37.5°	2840.9	2181.9	516.5	145.7	134.4	129.8	134.4	145.7	175.9	215.4	226.2
40°	3188.2	2469.1	372.4	144.6	131.8	127.7	129.2	140.5	167.2	209.3	225.2
42.5°	3615.9	2590.1	274.4	142.1	129.2	123.1	124.1	138.5	158.5	196.4	208.2
45°	3966.2	2678.3	215.9	141.0	123.1	121.0	123.1	136.9	150.3	168.7	179.5
47.5°	4232.4	2780.9	173.4	134.4	121.6	121.0	118.5	128.2	136.4	141.0	148.2
50°	4427.3	2757.8	143.6	124.1	116.4	119.5	114.9	116.4	118.5	115.9	124.1
52.5°	4546.8	2674.8	119.5	111.8	110.3	112.8	107.2	102.6	99.0	96.9	102.1
55°	4590.4	2508.1	101.6	95.9	99.5	100.5	95.9	87.7	81.6	78.5	82.6
57.5°	4507.8	2254.2	88.2	79.5	87.7	87.7	81.6	72.8	65.7	60.5	64.6
60°	4298.6	1973.6	78.5	66.2	74.9	75.4	68.2	59.0	53.3	48.2	50.8
62.5°	3908.8	1667.9	68.7	57.4	64.6	65.1	56.4	47.7	43.6	38.0	40.0
65°	3129.2	1275.6	58.5	50.8	55.9	54.4	46.7	40.5	35.4	30.3	31.3
67.5°	2031.1	787.3	50.8	46.2	47.2	45.6	39.5	35.4	29.7	25.6	26.2
70°	909.4	339.0	44.6	41.5	41.0	38.5	33.3	32.8	29.2	25.6	25.6
72.5°	280.6	127.7	38.5	37.4	35.4	32.3	29.2	31.3	28.7	24.6	24.1
75°	110.8	58.5	31.8	31.8	30.8	26.7	26.2	28.2	26.7	22.6	21.5
77.5°	58.0	36.9	26.2	27.2	26.7	20.5	23.6	25.6	24.6	19.0	15.9
80°	34.4	22.6	19.5	22.1	21.5	14.4	18.0	16.4	11.8	5.6	1.5
82.5°	19.0	10.3	8.7	12.8	12.8	5.1	9.2	8.2	4.6	0.0	0.0
85°	9.2	7.2	6.7	7.2	5.1	1.5	4.6	4.6	2.6	0.0	0.0
87.5°	4.6	4.1	3.1	2.6	2.1	0.0	1.5	2.1	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)