

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: P597083

Luminaire Tested: **MSA-SA3D-835-U-T2-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597083
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-9)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3D-835-U-T2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12376 lumens
Efficiency: N/A
Efficacy: 64.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G2

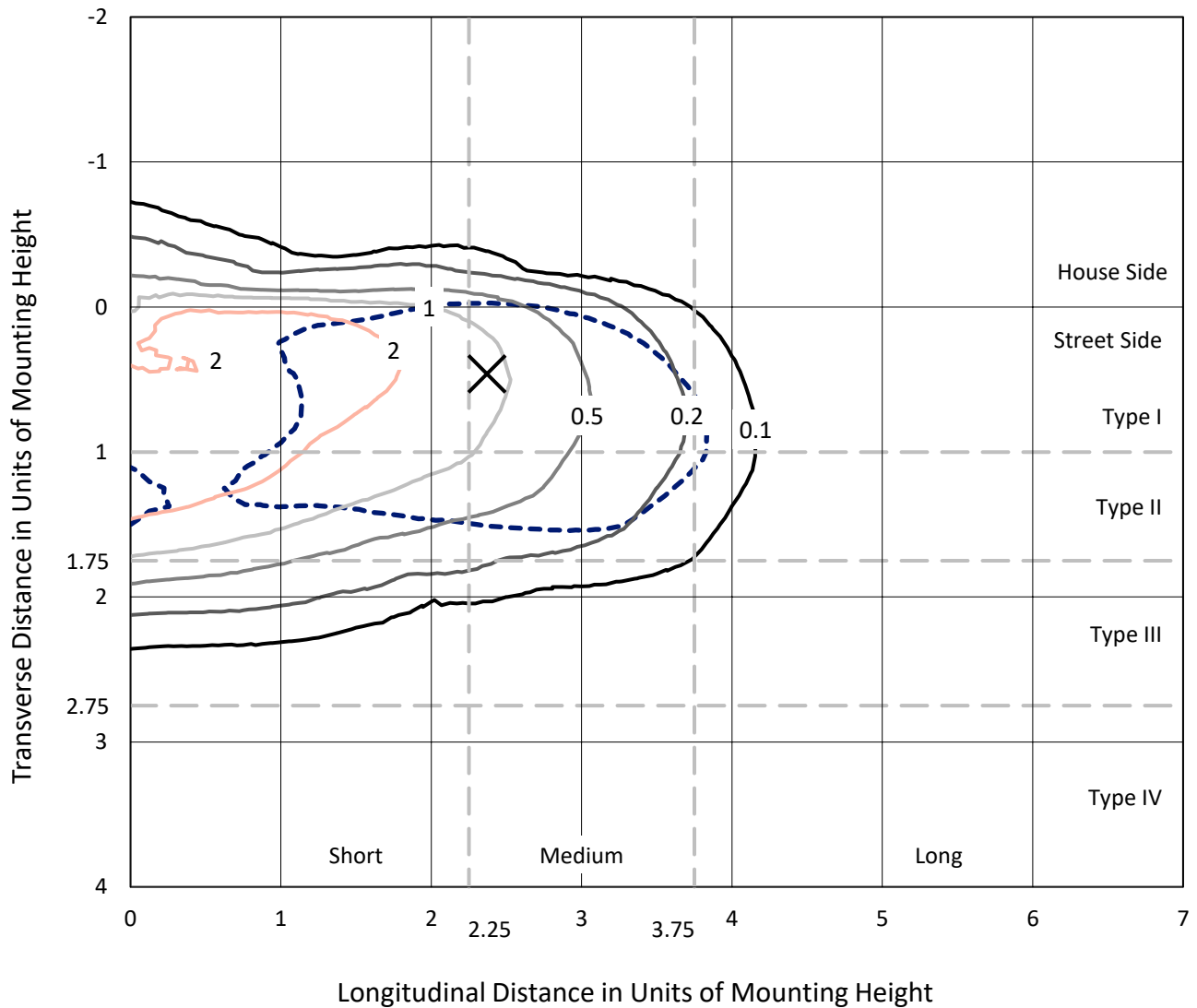
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

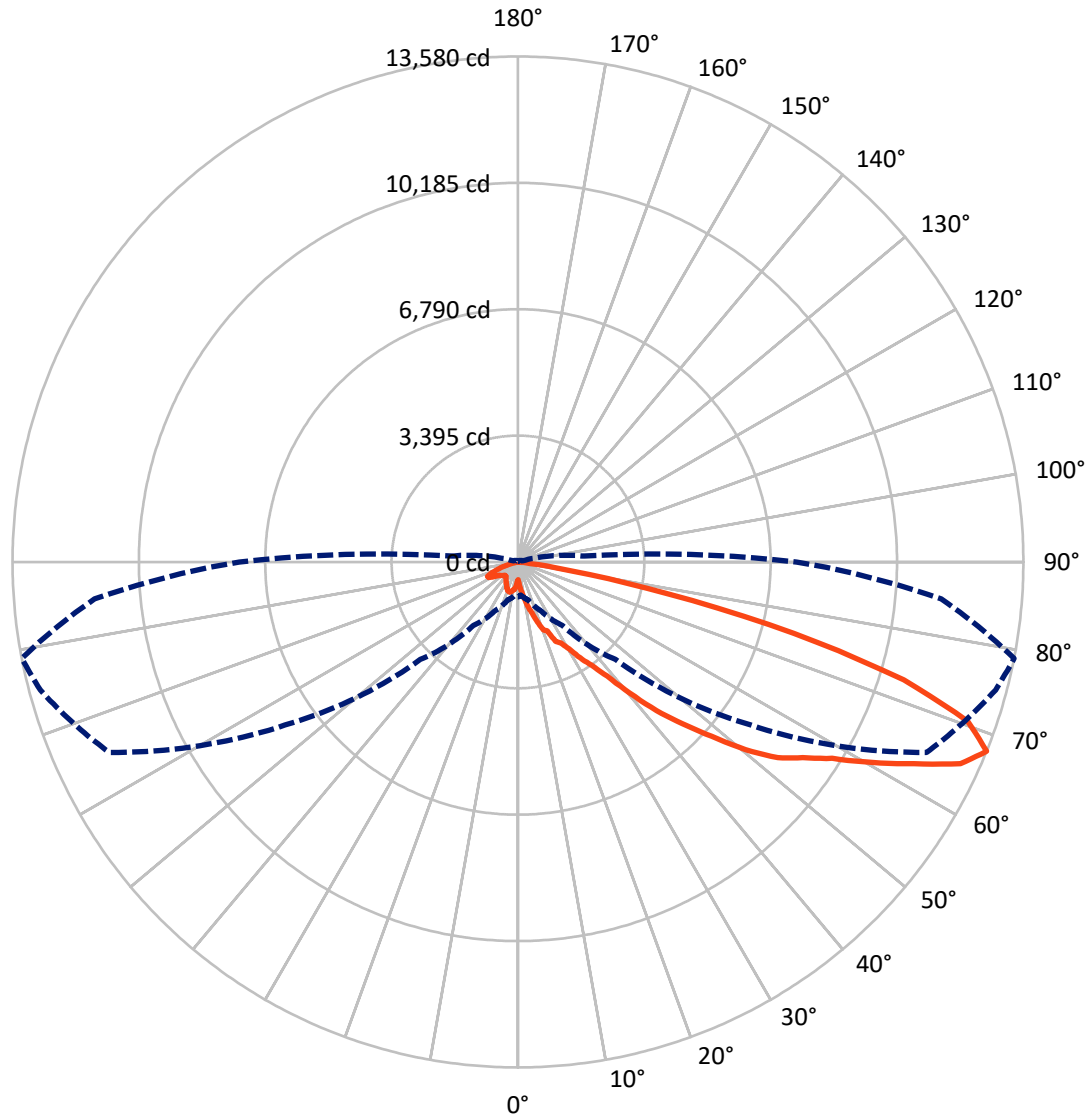
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.7 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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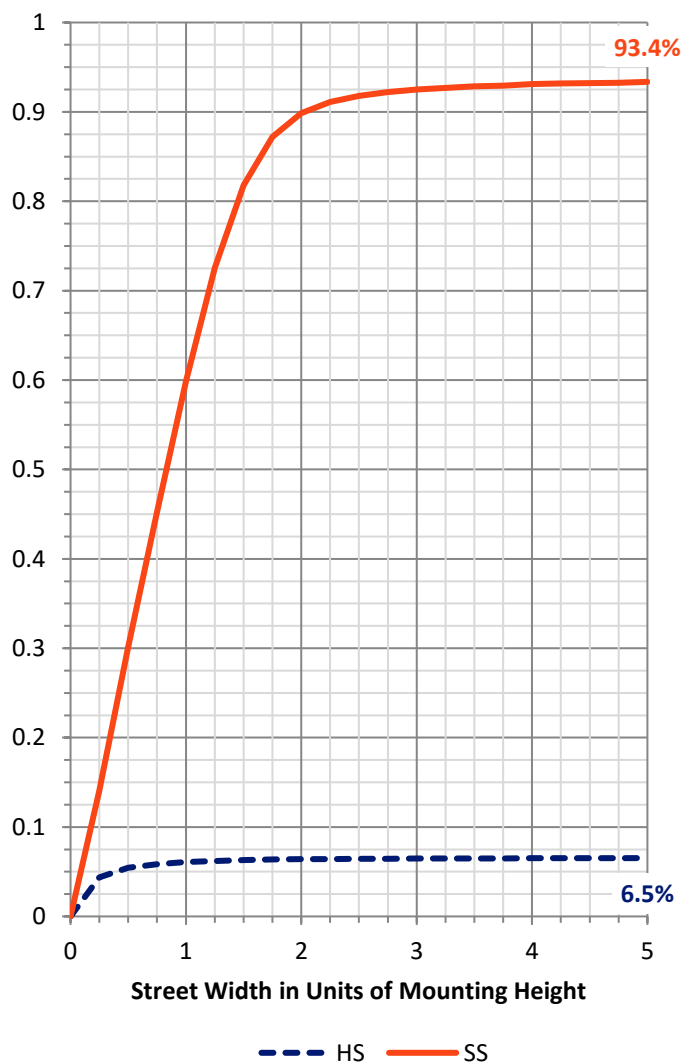
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	813.2	0.0	813.2
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	11562.8	0.0	11562.8
	% Fixture	93.4	0.0	93.4
Total	Lumens	12376.0	0.0	12376.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.4	0.6
10°-20°	276.5	2.2
20°-30°	533.5	4.3
30°-40°	1048.0	8.5
40°-50°	2099.4	17.0
50°-60°	3355.6	27.1
60°-70°	3376.3	27.3
70°-80°	1523.1	12.3
80°-90°	94.2	0.8
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°	12376.0	100.0
0°-180°	12376.0	100.0

Coefficient of Utilization



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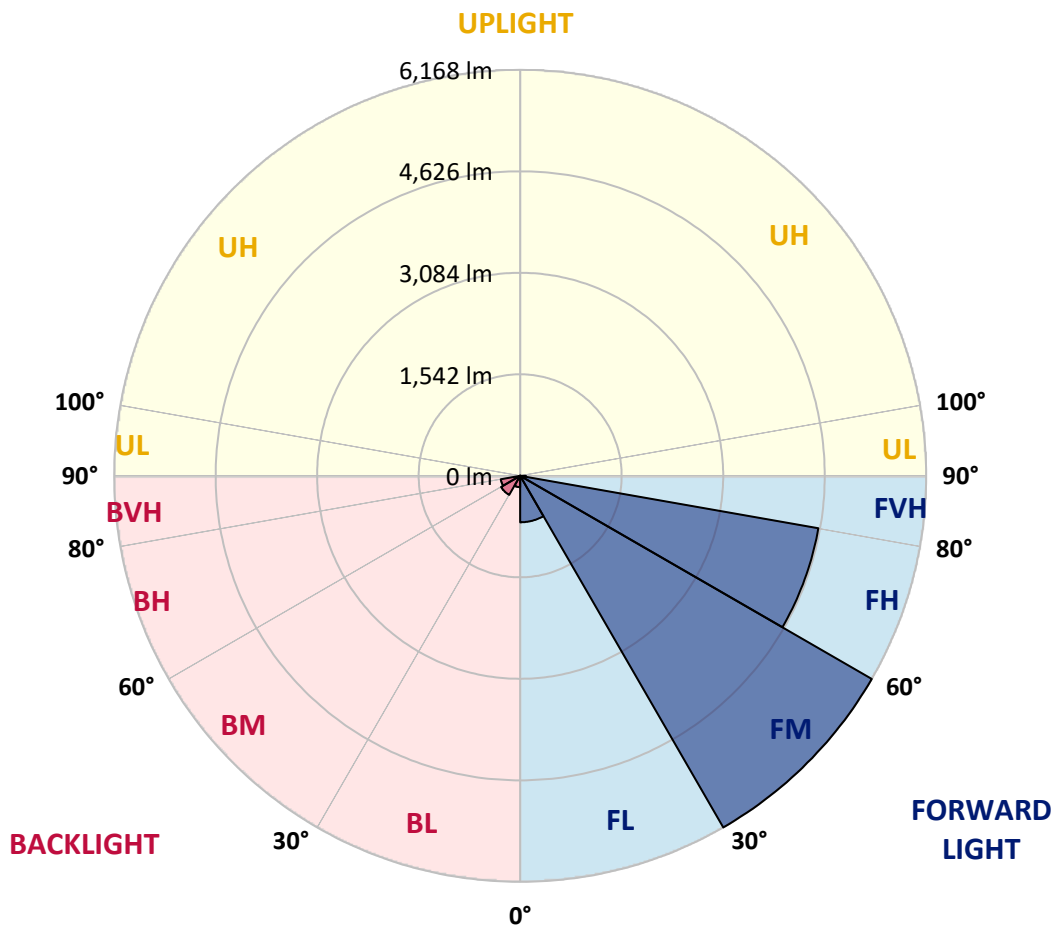
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	706.5	5.7			
FM (30°-60°)	6168.4	49.8			
FH (60°-80°)	4599.7	37.2			G2/5000
FVH (80°-90°)	88.2	0.7			G1/100
BL (0°-30°)	172.9	1.4	B1/500		
BM (30°-60°)	334.6	2.7	B1/1000		
BH (60°-80°)	299.8	2.4	B1/500		G1/500
BVH (80°-90°)	6.0	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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	476.9	476.9	476.9	476.9	476.9	476.9	476.9	476.9	476.9	476.9	476.9
2.5°	644.0	620.8	583.3	604.5	603.1	614.0	593.5	571.0	534.9	571.0	573.8
5°	927.2	884.2	856.9	851.4	821.4	793.4	787.3	764.1	746.4	714.3	742.9
7.5°	1155.0	1135.2	1086.8	1081.3	1007.7	966.7	979.7	969.5	901.9	868.5	896.5
10°	1251.9	1217.8	1224.6	1217.8	1186.4	1198.0	1171.4	1140.7	1086.8	1031.5	961.9
12.5°	1289.4	1284.0	1340.6	1333.8	1407.4	1496.1	1436.8	1385.6	1260.8	1247.1	1152.3
15°	1369.9	1404.0	1395.8	1424.5	1471.6	1622.3	1621.0	1633.3	1500.9	1430.0	1292.8
17.5°	1441.6	1466.8	1425.9	1458.6	1586.9	1678.3	1800.4	1752.7	1767.7	1695.3	1483.2
20°	1410.9	1439.5	1398.6	1378.8	1604.6	1777.9	1940.9	1906.2	1996.2	1951.2	1658.5
22.5°	1602.6	1548.7	1445.6	1381.5	1550.0	1775.8	1990.8	2136.1	2120.4	2009.9	1821.6
25°	1839.3	1806.5	1683.1	1569.8	1584.8	1763.6	2147.7	2361.2	2407.6	2360.5	1976.4
27.5°	2158.6	2151.1	1898.6	1849.5	1703.5	1709.7	2172.2	2645.0	2539.3	2465.6	2157.2
30°	2575.4	2516.1	2216.6	2152.4	1936.9	1831.1	2322.3	2889.9	2812.2	2711.9	2327.1
32.5°	3023.6	3032.5	2650.5	2439.0	2265.7	2140.2	2263.0	3004.5	3149.9	3068.7	2539.3
35°	3532.6	3572.2	3104.8	2856.5	2519.5	2334.6	2518.1	3356.6	3617.2	3403.7	2823.8
37.5°	4316.5	4315.1	3769.3	3274.7	3029.8	2829.2	2943.1	3676.5	4191.6	3891.4	3334.1
40°	5006.2	4856.1	4348.5	3780.2	3398.2	3343.6	3261.1	4114.5	4805.0	4624.2	3787.7
42.5°	5521.3	5415.6	4802.2	4360.1	3886.7	3713.4	3684.0	4756.5	5710.3	5457.2	4435.2
45°	6137.4	5790.8	5339.1	4940.7	4458.4	4407.9	4339.0	5408.0	6763.6	6193.3	4998.0
47.5°	6689.3	6363.2	5936.1	5424.4	4870.4	5286.6	5021.9	5980.4	7529.8	6994.2	5618.9
50°	7153.9	6807.3	6329.1	5939.5	5702.1	5984.5	5543.1	6451.9	8357.3	7923.4	6199.4
52.5°	7390.6	6998.3	6628.6	6387.7	6533.0	6469.6	6249.9	7022.9	9062.8	8738.0	6713.8
55°	7196.2	6812.8	6657.9	6777.3	7218.7	7035.2	7052.9	7907.7	9728.6	9281.1	7161.4
57.5°	6333.8	5983.8	6052.8	6379.5	7225.5	7705.8	7968.5	8767.4	10262.8	9957.8	7851.8
60°	4791.3	4509.5	4764.7	5344.6	6546.0	7572.1	8617.9	9627.0	11026.2	10930.7	8897.0
62.5°	2926.1	2773.3	3134.9	3858.0	5216.3	6916.5	8996.6	10773.1	11842.8	11944.5	10005.6
65°	1492.7	1423.8	1725.4	2361.2	3524.4	5681.6	8723.0	11485.4	12686.8	13062.0	11062.4
67.5°	940.1	895.8	1056.8	1440.2	2079.4	3705.9	7637.6	12108.2	13283.0	13579.8	11415.1
70°	651.5	623.6	762.7	988.6	1311.9	1996.2	5670.7	11527.0	12810.3	12823.9	10561.6
72.5°	413.4	391.6	527.4	732.0	968.1	1030.9	3250.8	9045.0	10965.5	10839.3	8553.1
75°	268.1	257.2	335.0	536.2	743.6	635.8	1606.7	6103.2	7862.7	7664.9	5680.9
77.5°	192.4	185.6	224.5	358.2	529.4	444.8	720.4	3637.7	4508.2	4075.6	2757.6
80°	116.0	115.3	162.4	224.5	376.6	313.8	332.9	1651.7	1747.9	1425.2	842.6
82.5°	58.0	60.0	90.7	144.6	242.2	205.4	152.1	549.9	469.4	345.9	170.6
85°	13.6	17.1	47.8	99.6	121.4	81.9	72.3	144.0	128.9	97.6	49.8
87.5°	0.0	0.0	15.0	23.9	32.7	13.6	24.6	27.3	34.8	27.3	10.2
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°	476.9	476.9	476.9	476.9	476.9	476.9	476.9	476.9	476.9	476.9	476.9
2.5°	574.4	566.3	516.4	503.5	502.1	487.8	491.2	477.6	478.2	508.9	508.9
5°	732.0	684.3	636.5	594.2	565.6	524.6	509.6	503.5	498.0	510.3	517.8
7.5°	859.6	789.3	703.4	611.3	526.0	467.3	459.1	444.1	438.7	451.0	460.5
10°	916.2	828.9	710.9	576.5	496.7	448.9	409.3	388.2	384.1	383.4	386.8
12.5°	1036.3	927.8	719.1	563.5	476.9	424.3	379.3	343.8	311.1	314.5	311.1
15°	1132.5	1004.2	719.1	532.1	429.1	376.6	297.5	279.7	274.9	282.4	276.3
17.5°	1277.8	1080.0	682.9	476.2	388.2	292.7	262.7	261.3	270.8	281.8	274.9
20°	1365.1	1090.2	622.2	412.1	318.6	253.8	242.9	232.0	245.6	254.5	251.1
22.5°	1455.9	1090.9	561.5	378.0	256.5	231.3	213.5	204.7	206.7	214.9	216.3
25°	1494.8	1064.3	504.9	332.9	232.6	206.7	188.3	178.7	175.3	179.4	178.1
27.5°	1600.5	1013.1	443.5	283.8	221.0	183.5	166.5	154.9	144.6	151.5	152.8
30°	1615.5	996.7	410.0	252.4	206.0	162.4	147.4	135.1	127.6	137.1	137.1
32.5°	1663.3	906.7	393.0	239.5	190.3	150.1	129.6	120.8	119.4	125.5	126.2
35°	1737.0	867.1	367.7	229.2	176.0	135.8	116.7	112.6	111.2	116.0	116.0
37.5°	1986.7	818.0	339.8	220.4	163.7	128.3	113.3	106.4	107.1	111.2	113.9
40°	2152.4	824.1	298.1	209.4	149.4	121.4	106.4	101.7	101.0	103.0	105.1
42.5°	2460.1	828.9	279.7	197.8	138.5	113.3	99.6	96.2	93.5	95.5	97.6
45°	2804.0	854.2	270.2	188.3	132.4	108.5	93.5	91.4	85.3	86.6	89.4
47.5°	3135.5	946.3	258.6	174.7	126.9	105.7	87.3	82.5	78.5	77.8	80.5
50°	3512.1	1035.6	245.6	159.6	121.4	101.7	81.2	73.7	71.0	71.0	73.0
52.5°	3849.1	1120.9	233.3	149.4	117.3	94.1	75.7	68.2	66.2	66.2	68.9
55°	4203.9	1210.3	222.4	139.9	111.9	86.6	71.0	64.1	63.4	62.1	64.1
57.5°	4830.2	1405.4	208.8	131.7	104.4	80.5	66.9	60.0	58.7	56.6	58.7
60°	5742.3	1704.9	191.0	123.5	95.5	76.4	63.4	55.3	53.2	49.8	50.5
62.5°	6634.0	1947.1	170.6	113.3	87.3	72.3	58.0	49.8	46.4	42.3	43.0
65°	7398.1	2042.6	148.7	101.0	79.1	62.8	50.5	43.7	38.9	33.4	32.7
67.5°	7488.2	1803.8	127.6	89.4	71.0	53.2	43.0	38.9	31.4	26.6	25.2
70°	6739.1	1344.0	106.4	79.1	61.4	45.0	36.8	34.1	29.3	25.2	23.2
72.5°	5366.4	992.0	89.4	70.3	53.9	38.2	31.4	32.1	29.3	24.6	21.8
75°	3549.0	567.6	73.0	58.7	45.0	30.7	28.7	28.7	28.0	23.2	20.5
77.5°	1707.6	244.9	55.9	46.4	36.2	23.2	25.9	25.9	26.6	21.1	17.1
80°	484.4	73.7	34.8	31.4	26.6	15.7	20.5	19.8	17.7	12.3	7.5
82.5°	86.6	28.7	15.7	16.4	15.0	6.1	11.6	10.9	8.9	4.8	0.7
85°	23.9	10.9	8.9	9.6	7.5	2.0	4.8	6.1	4.8	2.7	0.0
87.5°	6.1	4.8	6.1	6.8	5.5	0.7	2.0	0.7	2.0	0.7	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)