

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: P368225

Luminaire Tested: **MSA-SA4A-730-U-T4W-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368225
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-15)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4A-730-U-T4W-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10644 lumens
Efficiency: N/A
Efficacy: 82.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

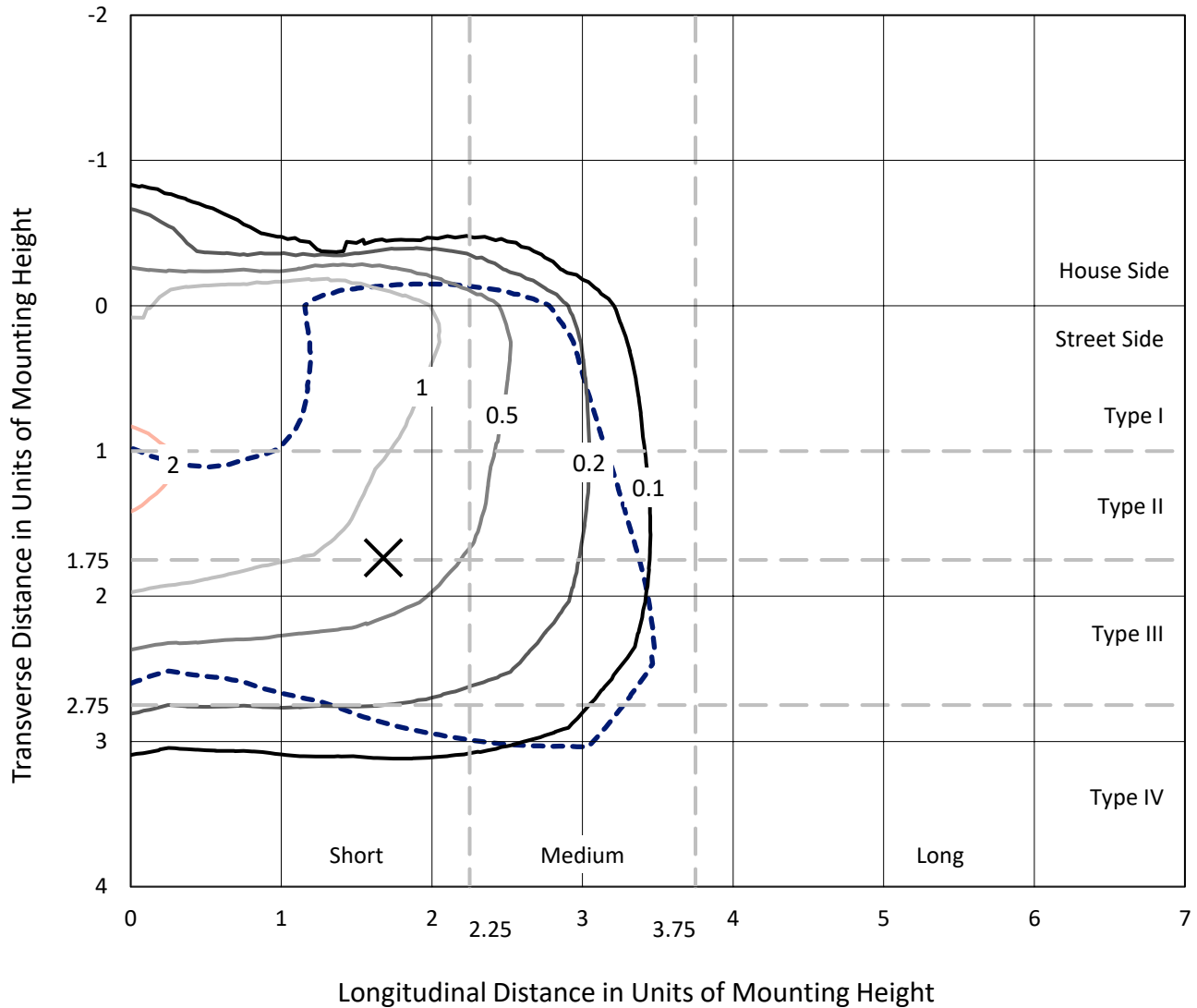
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

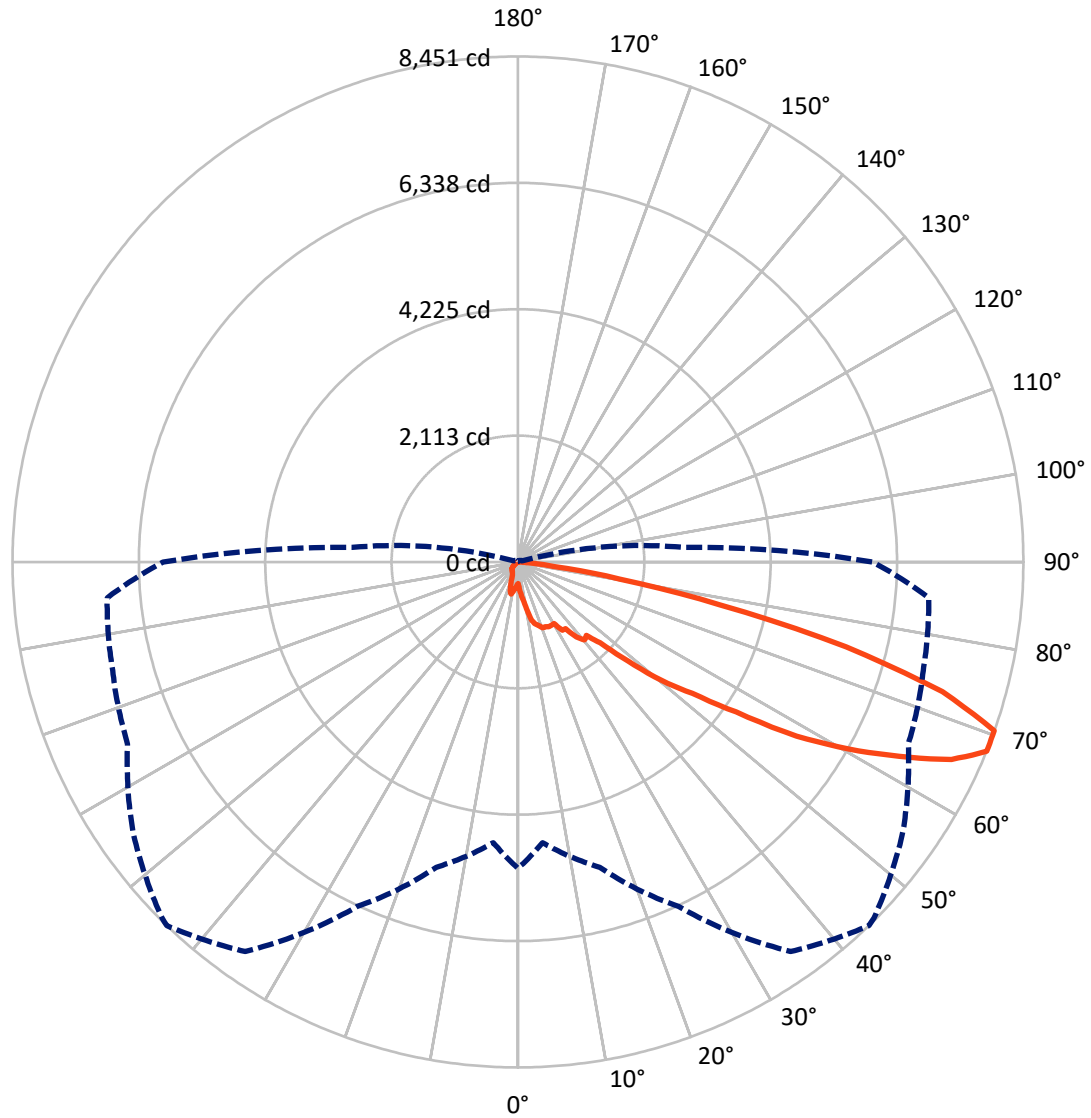
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.5 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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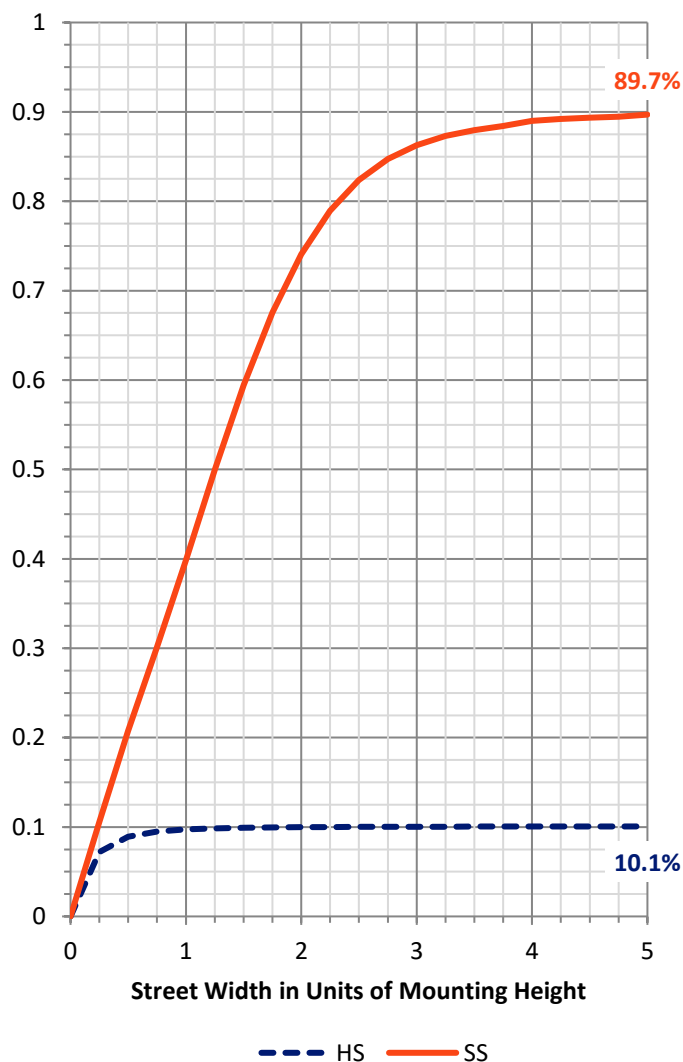
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1081.2	0.0	1081.2
	% Fixture	10.2	0.0	10.2
Street Side	Lumens	9562.8	0.0	9562.8
	% Fixture	89.8	0.0	89.8
Total	Lumens	10644.0	0.0	10644.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.1	0.5
10°-20°	222.5	2.1
20°-30°	394.2	3.7
30°-40°	640.8	6.0
40°-50°	1282.2	12.0
50°-60°	2630.5	24.7
60°-70°	3613.5	33.9
70°-80°	1698.4	16.0
80°-90°	108.8	1.0
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°	10644.0	100.0
0°-180°	10644.0	100.0

Coefficient of Utilization

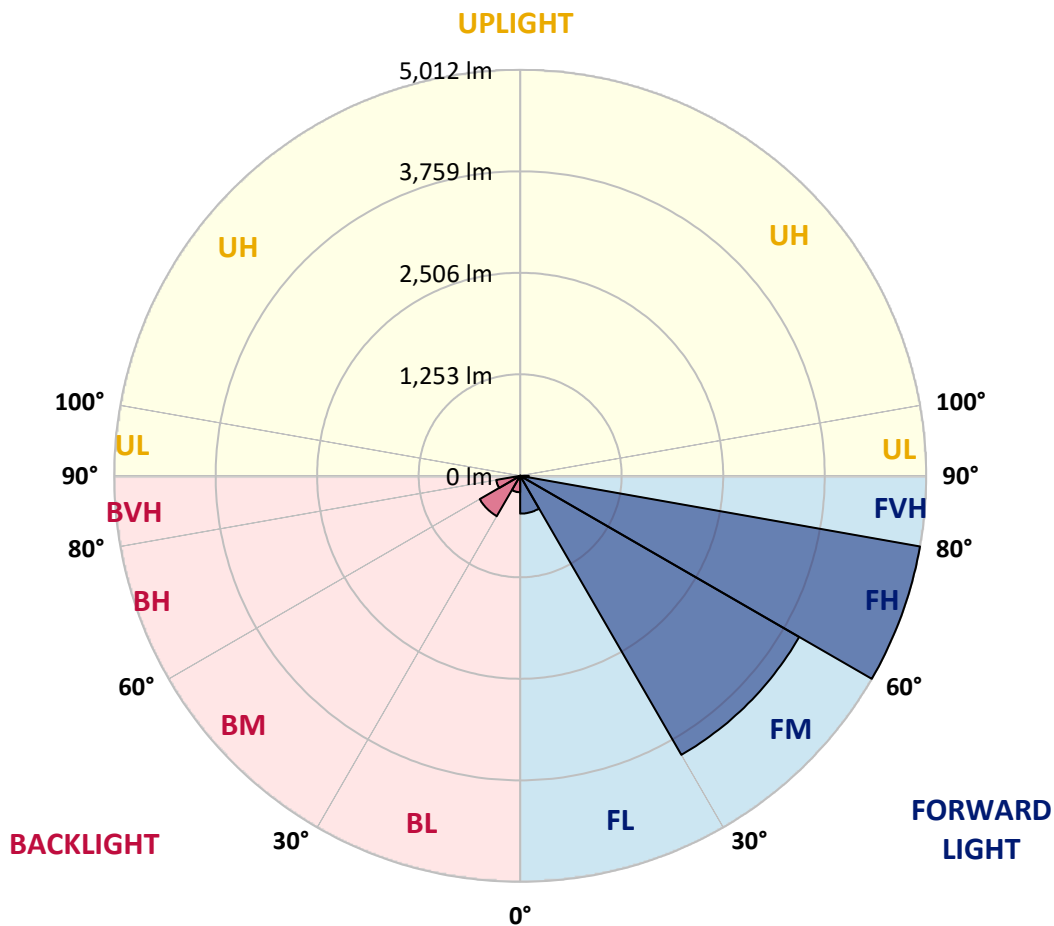


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	466.9	4.4			
FM (30°-60°)	3977.5	37.4			
FH (60°-80°)	5011.9	47.1			G3/7500
FVH (80°-90°)	106.6	1.0			G2/225
BL (0°-30°)	203.0	1.9	B1/500		
BM (30°-60°)	576.0	5.4	B1/1000		
BH (60°-80°)	300.0	2.8	B1/500		G1/500
BVH (80°-90°)	2.2	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-G3
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	358.6	358.6	358.6	358.6	358.6	358.6	358.6	358.6	358.6	358.6	358.6
2.5°	456.0	441.4	420.2	424.9	427.3	433.7	434.3	426.1	402.6	396.2	424.9
5°	639.2	603.4	596.9	583.4	556.4	541.7	538.2	552.9	534.1	528.2	535.9
7.5°	816.4	785.9	752.5	734.3	677.9	643.3	641.5	647.4	650.9	630.4	640.9
10°	934.4	900.9	893.9	851.1	802.3	794.1	790.6	768.3	750.1	734.8	683.8
12.5°	1041.2	1040.6	1053.5	991.9	984.3	992.5	989.6	909.7	891.6	827.6	812.9
15°	1183.3	1218.5	1162.7	1111.1	1045.3	1073.5	1065.9	1014.8	1002.5	959.1	896.2
17.5°	1330.6	1340.0	1246.7	1167.4	1150.4	1113.4	1121.0	1102.9	1040.6	1075.3	1013.0
20°	1334.1	1354.6	1254.9	1124.0	1176.2	1174.5	1175.0	1157.4	1075.3	1156.3	1099.3
22.5°	1383.4	1332.9	1240.2	1156.8	1166.2	1175.0	1184.4	1162.7	1145.1	1165.1	1175.6
25°	1363.5	1343.5	1254.3	1199.1	1190.3	1197.3	1199.7	1227.3	1216.1	1264.3	1237.8
27.5°	1415.1	1386.3	1226.7	1236.7	1205.6	1197.3	1183.3	1275.4	1308.3	1270.1	1340.6
30°	1503.7	1499.6	1274.2	1288.9	1264.8	1192.7	1230.2	1350.5	1391.6	1368.1	1453.8
32.5°	1642.2	1656.3	1413.3	1318.3	1330.6	1362.9	1348.8	1350.5	1454.4	1506.7	1574.7
35°	1838.9	1831.2	1548.9	1429.8	1365.2	1370.5	1390.4	1486.1	1620.5	1617.0	1689.2
37.5°	2225.1	2141.7	1789.0	1543.6	1563.0	1589.4	1574.7	1703.3	1716.2	1720.9	1893.5
40°	2794.4	2683.5	2167.6	1783.7	1597.1	1713.9	1706.8	1738.5	1824.8	1857.1	2108.9
42.5°	3544.5	3395.4	2833.7	2225.1	1761.4	1681.0	1724.4	1784.3	2074.2	2166.4	2442.2
45°	4373.3	4071.6	3498.1	2854.3	2173.4	1924.0	1956.8	2068.4	2470.4	2623.0	2927.6
47.5°	4910.3	4645.0	4156.1	3411.9	2603.1	2472.2	2475.1	2499.2	2935.8	3218.8	3627.3
50°	5376.9	5094.6	4640.9	3994.7	3363.1	3115.5	3059.1	2948.2	3528.7	3915.4	4368.6
52.5°	6035.5	5705.6	5125.7	4678.5	4230.0	3646.6	3626.7	3664.2	4227.7	4634.4	5128.6
55°	6629.4	6228.6	5675.1	5393.3	5218.4	4427.3	4444.3	4507.1	5125.1	5340.5	5804.8
57.5°	6891.8	6457.5	6172.8	6046.0	5952.7	5493.7	5436.2	5398.6	5833.0	5915.1	6513.2
60°	7063.8	6650.6	6521.4	6550.8	6833.7	6346.5	6294.3	6076.0	6418.7	6486.2	7148.3
62.5°	6955.2	6578.4	6606.0	6850.7	7478.7	7158.3	7007.4	6642.3	6897.7	6952.2	7604.3
65°	6271.4	5878.7	6233.3	6825.5	7970.6	7962.9	7893.1	7165.3	7163.0	7232.8	7639.5
67.5°	5122.8	4710.7	5284.2	6352.4	7950.0	8450.7	8417.8	7859.1	7201.1	7014.5	6894.1
70°	3561.5	3204.1	3854.4	5246.0	7241.6	8447.2	8394.3	8325.1	6899.4	6037.8	5345.2
72.5°	1850.6	1654.0	2259.7	3614.9	5772.5	7421.8	7596.1	7482.2	5891.1	4386.8	3147.7
75°	628.6	564.0	932.1	1918.7	3837.4	5667.4	5871.7	5756.1	4001.1	2353.6	1244.9
77.5°	243.6	226.6	334.0	778.9	1925.1	3453.5	3675.4	3557.4	2145.8	862.2	292.9
80°	138.5	133.8	184.3	351.0	848.7	1718.0	1874.1	1699.8	773.6	290.5	76.3
82.5°	58.7	60.5	102.7	189.6	426.7	606.3	676.1	616.9	324.0	199.0	28.2
85°	12.9	15.8	48.7	105.6	179.0	173.1	181.4	201.3	199.0	146.1	12.3
87.5°	0.0	0.0	15.3	28.8	42.8	28.2	22.3	39.3	61.0	58.7	5.3
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°	358.6	358.6	358.6	358.6	358.6	358.6	358.6	358.6	358.6	358.6	358.6
2.5°	430.2	424.4	387.4	385.0	387.4	380.9	380.3	366.8	368.0	398.5	400.9
5°	535.9	506.5	474.8	464.9	455.5	434.3	446.1	446.1	446.1	465.4	471.3
7.5°	631.5	592.2	547.6	510.0	473.7	447.2	465.4	478.4	486.0	511.2	523.0
10°	675.0	636.2	596.3	542.9	514.7	504.8	483.6	472.5	486.0	480.7	487.2
12.5°	767.7	732.5	663.8	608.7	587.5	553.5	491.3	447.8	419.1	414.4	413.2
15°	858.1	836.4	744.2	670.3	596.9	518.3	412.0	354.5	324.0	318.7	319.3
17.5°	972.6	941.4	805.9	699.6	575.2	433.7	318.1	268.8	266.5	279.4	280.6
20°	1048.9	997.8	837.0	675.6	503.6	328.1	248.9	237.1	255.9	279.4	277.0
22.5°	1121.6	1066.5	878.1	654.4	390.3	248.9	228.9	230.1	245.9	271.2	277.6
25°	1169.8	1149.8	928.5	605.1	297.6	215.4	218.9	227.7	241.2	265.3	265.3
27.5°	1314.7	1221.4	922.7	509.5	228.9	200.7	208.9	220.1	227.1	255.9	258.8
30°	1402.8	1372.3	953.2	412.0	200.7	181.9	197.8	207.8	212.5	245.3	246.5
32.5°	1510.8	1443.3	990.2	304.0	186.6	180.8	177.3	184.9	198.4	227.1	228.9
35°	1642.2	1622.3	937.3	238.9	181.9	169.0	162.0	166.1	174.9	194.3	198.4
37.5°	1910.5	1791.9	905.6	204.8	181.9	164.9	157.3	146.7	147.9	161.4	169.0
40°	2136.4	2100.1	817.0	199.0	173.7	159.1	140.3	127.4	118.6	122.7	125.6
42.5°	2551.4	2383.0	702.6	196.0	166.1	143.8	119.1	105.6	92.1	93.3	98.0
45°	3055.0	2691.7	600.4	193.1	160.8	128.5	100.4	84.5	70.4	71.0	75.7
47.5°	3727.6	3141.9	476.6	184.3	151.4	114.5	81.0	64.6	56.3	58.1	62.2
50°	4491.8	3536.9	376.8	170.8	140.3	101.0	65.7	52.2	49.3	51.1	55.8
52.5°	5174.4	3828.0	311.1	158.5	124.4	82.2	55.2	46.4	45.2	46.4	49.9
55°	5781.3	3997.0	260.0	144.4	106.8	66.3	49.9	42.8	42.3	41.7	44.0
57.5°	6350.6	4045.7	203.1	122.1	86.9	57.5	46.4	39.9	38.7	37.0	38.7
60°	6765.6	3962.4	149.1	98.0	71.0	52.2	43.4	35.8	34.0	31.1	32.3
62.5°	6965.7	3734.1	112.7	78.6	60.5	47.5	38.7	31.1	28.8	25.2	25.8
65°	6775.6	3357.9	88.6	66.3	51.7	39.9	32.9	26.4	23.5	20.0	20.0
67.5°	5933.3	2785.6	75.1	57.5	43.4	34.0	27.0	24.1	19.4	16.4	15.8
70°	4355.1	2003.8	64.6	50.5	37.6	29.3	22.9	21.7	18.8	15.8	14.7
72.5°	2458.1	1134.0	55.2	44.6	31.7	24.7	19.4	20.0	18.2	14.7	13.5
75°	937.9	382.1	45.8	37.0	25.8	18.8	16.4	16.4	16.4	12.3	10.6
77.5°	232.4	97.4	36.4	29.9	20.5	12.3	13.5	14.1	14.1	10.6	7.6
80°	64.0	32.9	21.7	21.7	14.7	7.0	9.4	9.4	7.6	3.5	0.0
82.5°	23.5	12.3	7.6	9.4	6.5	2.3	3.5	2.3	1.8	0.0	0.0
85°	10.0	6.5	4.7	5.3	2.9	0.0	0.6	1.2	0.0	0.0	0.0
87.5°	4.1	2.9	2.3	2.3	1.2	0.0	0.0	0.0	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)