

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: P368615

Luminaire Tested: **MSA-SA4D-730-U-T2-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368615
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-9)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4D-730-U-T2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 18070 lumens
Efficiency: N/A
Efficacy: 69.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G3

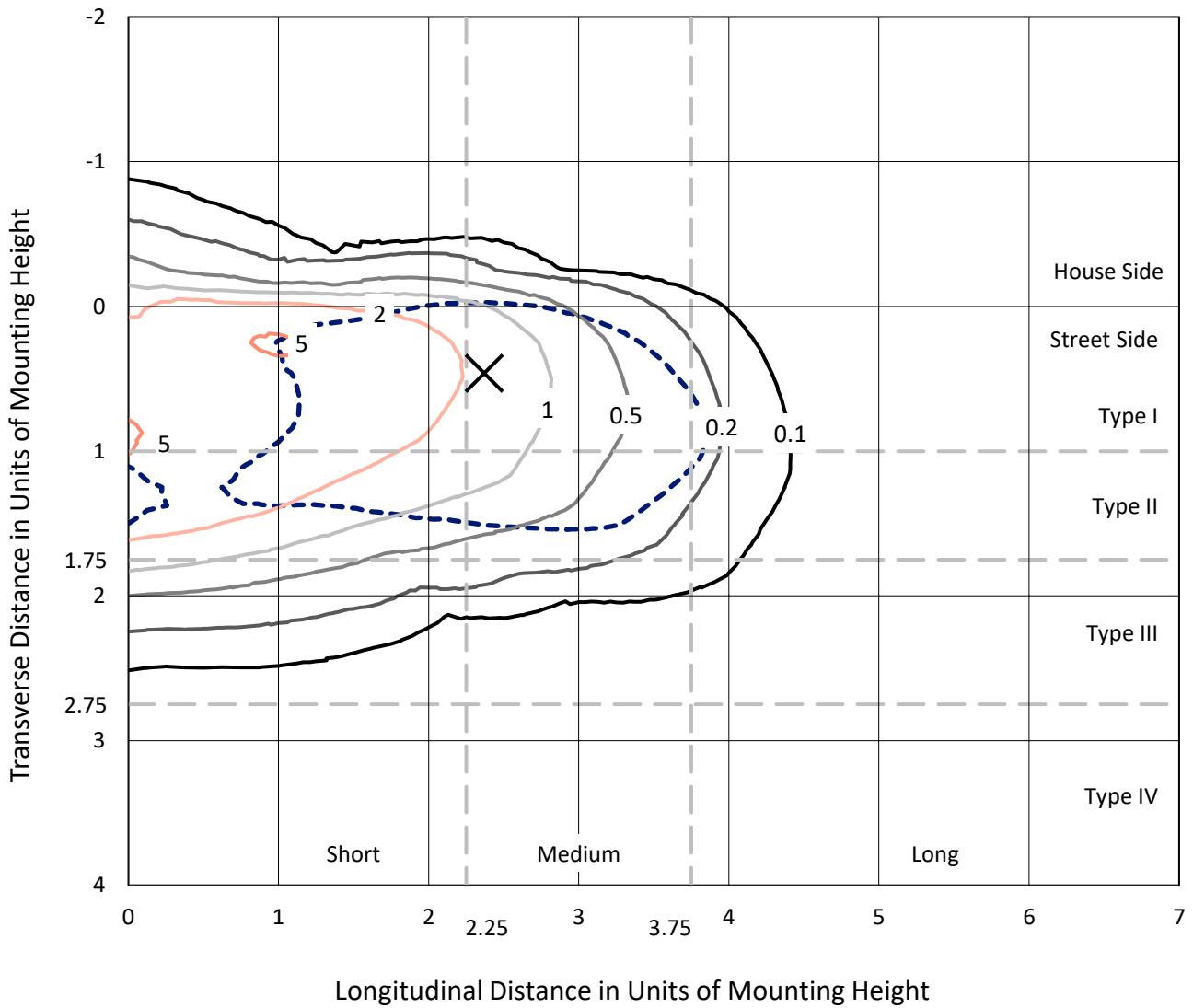
Input Watts (W): 259
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

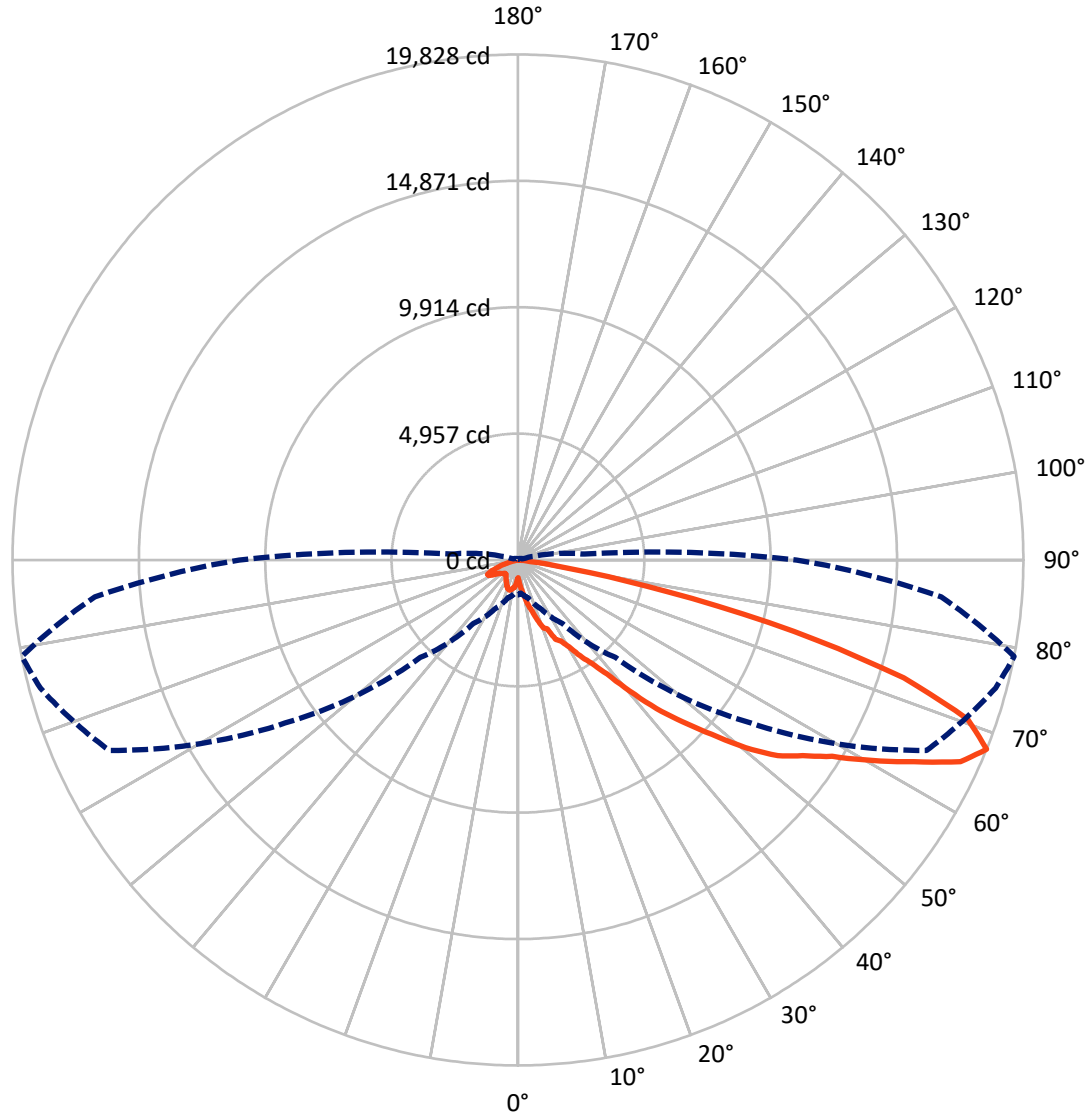
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.4 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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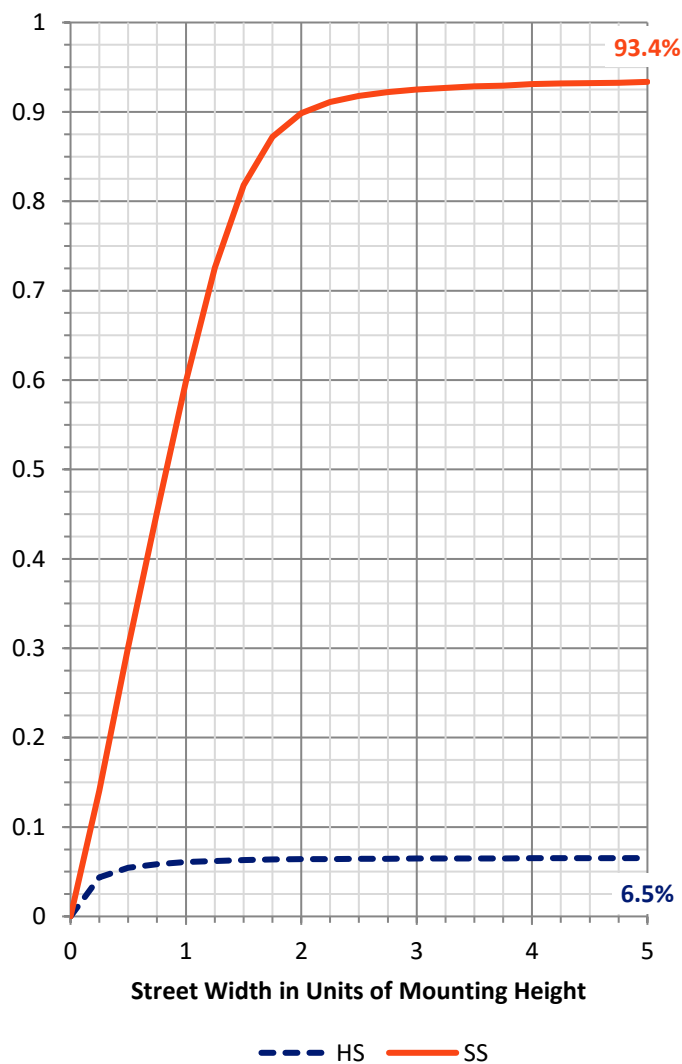
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1187.3	0.0	1187.3
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	16882.7	0.0	16882.7
	% Fixture	93.4	0.0	93.4
Total	Lumens	18070.0	0.0	18070.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.3	0.6
10°-20°	403.8	2.2
20°-30°	779.0	4.3
30°-40°	1530.1	8.5
40°-50°	3065.3	17.0
50°-60°	4899.4	27.1
60°-70°	4929.7	27.3
70°-80°	2223.9	12.3
80°-90°	137.6	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°	18070.0	100.0
0°-180°	18070.0	100.0

Coefficient of Utilization

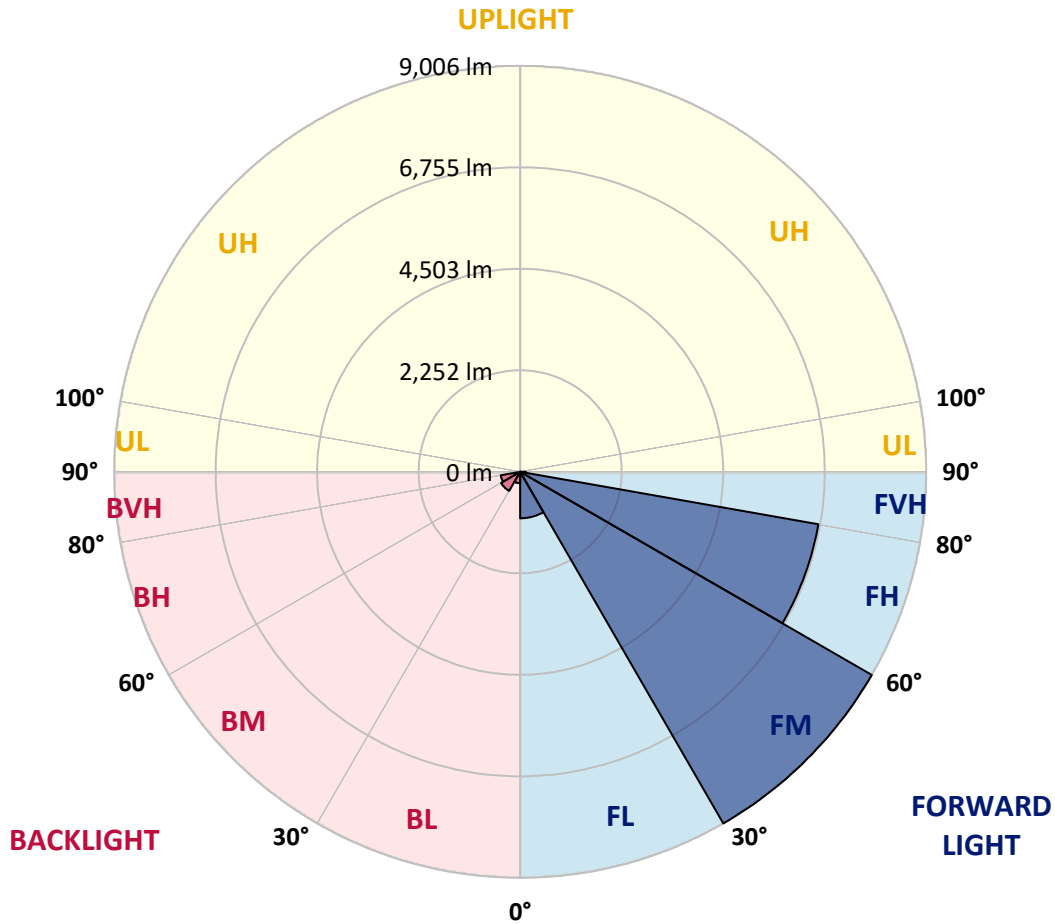


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1031.6	5.7			
FM (30°-60°)	9006.4	49.8			
FH (60°-80°)	6715.9	37.2			G3/7500
FVH (80°-90°)	128.8	0.7			G2/225
BL (0°-30°)	252.4	1.4	B1/500		
BM (30°-60°)	488.5	2.7	B1/1000		
BH (60°-80°)	437.7	2.4	B1/500		G1/500
BVH (80°-90°)	8.8	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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	696.3	696.3	696.3	696.3	696.3	696.3	696.3	696.3	696.3	696.3	696.3
2.5°	940.3	906.5	851.7	882.6	880.6	896.5	866.6	833.7	781.0	833.7	837.7
5°	1353.7	1291.0	1251.1	1243.2	1199.3	1158.5	1149.5	1115.6	1089.7	1042.9	1084.8
7.5°	1686.4	1657.5	1586.8	1578.8	1471.3	1411.5	1430.4	1415.5	1316.9	1268.1	1308.9
10°	1827.9	1778.1	1788.0	1778.1	1732.2	1749.2	1710.3	1665.5	1586.8	1506.1	1404.5
12.5°	1882.7	1874.7	1957.4	1947.4	2055.0	2184.5	2097.8	2023.1	1840.8	1820.9	1682.4
15°	2000.2	2050.0	2038.1	2079.9	2148.6	2368.8	2366.8	2384.7	2191.5	2087.9	1887.6
17.5°	2104.8	2141.6	2081.9	2129.7	2317.0	2450.4	2628.7	2559.0	2580.9	2475.3	2165.6
20°	2060.0	2101.8	2042.0	2013.1	2342.9	2595.9	2833.9	2783.1	2914.6	2848.9	2421.6
22.5°	2339.9	2261.2	2110.8	2017.1	2263.2	2592.9	2906.7	3118.8	3095.9	2934.6	2659.6
25°	2685.5	2637.7	2457.4	2292.1	2314.0	2575.0	3135.8	3447.6	3515.3	3446.6	2885.7
27.5°	3151.7	3140.7	2772.2	2700.5	2487.3	2496.3	3171.6	3861.9	3707.5	3600.0	3149.7
30°	3760.3	3673.7	3236.4	3142.7	2828.0	2673.6	3390.8	4219.5	4106.0	3959.6	3397.7
32.5°	4414.8	4427.7	3869.9	3561.1	3308.1	3124.8	3304.1	4386.9	4599.1	4480.5	3707.5
35°	5157.9	5215.7	4533.3	4170.7	3678.7	3408.7	3676.7	4900.9	5281.4	4969.6	4122.9
37.5°	6302.4	6300.4	5503.5	4781.4	4423.7	4130.9	4297.2	5368.1	6120.1	5681.8	4868.0
40°	7309.5	7090.3	6349.2	5519.5	4961.6	4882.0	4761.4	6007.6	7015.6	6751.7	5530.4
42.5°	8061.6	7907.2	7011.7	6366.2	5674.9	5421.9	5379.0	6944.9	8337.5	7967.9	6475.7
45°	8961.0	8455.0	7795.6	7213.9	6509.6	6435.9	6335.3	7896.2	9875.5	9042.7	7297.5
47.5°	9766.9	9290.8	8667.2	7920.1	7111.3	7718.9	7332.4	8731.9	10994.1	10212.2	8204.0
50°	10445.3	9939.2	9241.0	8672.2	8325.5	8737.9	8093.4	9420.3	12202.4	11568.9	9051.7
52.5°	10790.9	10218.1	9678.2	9326.6	9538.8	9446.2	9125.4	10254.0	13232.4	12758.2	9802.8
55°	10507.0	9947.2	9721.1	9895.4	10539.9	10271.9	10297.8	11546.0	14204.6	13551.1	10456.2
57.5°	9247.9	8736.9	8837.5	9314.7	10549.9	11251.1	11634.6	12801.1	14984.6	14539.3	11464.3
60°	6995.7	6584.3	6956.9	7803.6	9557.7	11055.9	12582.9	14056.2	16099.2	15959.7	12990.3
62.5°	4272.3	4049.2	4577.1	5633.0	7616.3	10098.6	13135.8	15729.6	17291.6	17440.0	14609.0
65°	2179.5	2078.9	2519.2	3447.6	5145.9	8295.6	12736.3	16769.6	18523.7	19071.6	16152.0
67.5°	1372.6	1307.9	1543.0	2102.8	3036.2	5410.9	11151.5	17679.0	19394.4	19827.7	16667.0
70°	951.3	910.4	1113.7	1443.4	1915.5	2914.6	8279.7	16830.4	18704.0	18724.0	15420.9
72.5°	603.6	571.8	770.0	1068.8	1413.5	1505.1	4746.5	13206.5	16010.6	15826.3	12488.3
75°	391.5	375.5	489.1	782.9	1085.8	928.4	2345.9	8911.2	11480.2	11191.3	8294.6
77.5°	280.9	270.9	327.7	523.0	773.0	649.5	1051.9	5311.3	6582.3	5950.8	4026.3
80°	169.3	168.3	237.1	327.7	549.9	458.2	486.1	2411.6	2552.0	2080.9	1230.2
82.5°	84.7	87.7	132.5	211.2	353.6	299.8	222.1	802.9	685.3	505.0	249.0
85°	19.9	24.9	69.7	145.4	177.3	119.5	105.6	210.2	188.3	142.4	72.7
87.5°	0.0	0.0	21.9	34.9	47.8	19.9	35.9	39.8	50.8	39.8	14.9
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°	696.3	696.3	696.3	696.3	696.3	696.3	696.3	696.3	696.3	696.3	696.3
2.5°	838.7	826.8	754.1	735.1	733.1	712.2	717.2	697.3	698.3	743.1	743.1
5°	1068.8	999.1	929.4	867.6	825.8	766.0	744.1	735.1	727.2	745.1	756.1
7.5°	1255.1	1152.5	1027.0	892.5	768.0	682.3	670.4	648.5	640.5	658.4	672.4
10°	1337.8	1210.3	1038.0	841.7	725.2	655.4	597.7	566.8	560.8	559.8	564.8
12.5°	1513.1	1354.7	1049.9	822.8	696.3	619.6	553.8	502.0	454.2	459.2	454.2
15°	1653.6	1466.3	1049.9	777.0	626.6	549.9	434.3	408.4	401.4	412.4	403.4
17.5°	1865.7	1576.8	997.1	695.3	566.8	427.3	383.5	381.5	395.5	411.4	401.4
20°	1993.2	1591.8	908.5	601.7	465.2	370.6	354.6	338.7	358.6	371.6	366.6
22.5°	2125.7	1592.8	819.8	551.8	374.5	337.7	311.8	298.8	301.8	313.8	315.8
25°	2182.5	1553.9	737.1	486.1	339.7	301.8	274.9	261.0	256.0	262.0	260.0
27.5°	2336.9	1479.2	647.5	414.4	322.7	268.0	243.1	226.1	211.2	221.1	223.1
30°	2358.8	1455.3	598.7	368.6	300.8	237.1	215.2	197.2	186.3	200.2	200.2
32.5°	2428.5	1323.8	573.8	349.6	277.9	219.1	189.3	176.3	174.3	183.3	184.3
35°	2536.1	1266.1	536.9	334.7	257.0	198.2	170.3	164.4	162.4	169.3	169.3
37.5°	2900.7	1194.3	496.1	321.7	239.1	187.3	165.4	155.4	156.4	162.4	166.4
40°	3142.7	1203.3	435.3	305.8	218.1	177.3	155.4	148.4	147.4	150.4	153.4
42.5°	3592.0	1210.3	408.4	288.9	202.2	165.4	145.4	140.5	136.5	139.5	142.4
45°	4094.0	1247.1	394.5	274.9	193.2	158.4	136.5	133.5	124.5	126.5	130.5
47.5°	4578.1	1381.6	377.5	255.0	185.3	154.4	127.5	120.5	114.6	113.6	117.5
50°	5128.0	1512.1	358.6	233.1	177.3	148.4	118.5	107.6	103.6	103.6	106.6
52.5°	5620.1	1636.6	340.7	218.1	171.3	137.5	110.6	99.6	96.6	96.6	100.6
55°	6138.1	1767.1	324.7	204.2	163.4	126.5	103.6	93.6	92.6	90.6	93.6
57.5°	7052.5	2052.0	304.8	192.3	152.4	117.5	97.6	87.7	85.7	82.7	85.7
60°	8384.3	2489.3	278.9	180.3	139.5	111.6	92.6	80.7	77.7	72.7	73.7
62.5°	9686.2	2842.9	249.0	165.4	127.5	105.6	84.7	72.7	67.7	61.8	62.8
65°	10801.9	2982.4	217.2	147.4	115.5	91.6	73.7	63.8	56.8	48.8	47.8
67.5°	10933.4	2633.7	186.3	130.5	103.6	77.7	62.8	56.8	45.8	38.8	36.9
70°	9839.6	1962.3	155.4	115.5	89.7	65.7	53.8	49.8	42.8	36.9	33.9
72.5°	7835.4	1448.4	130.5	102.6	78.7	55.8	45.8	46.8	42.8	35.9	31.9
75°	5181.8	828.8	106.6	85.7	65.7	44.8	41.8	41.8	40.8	33.9	29.9
77.5°	2493.3	357.6	81.7	67.7	52.8	33.9	37.9	37.9	38.8	30.9	24.9
80°	707.2	107.6	50.8	45.8	38.8	22.9	29.9	28.9	25.9	17.9	11.0
82.5°	126.5	41.8	22.9	23.9	21.9	9.0	16.9	15.9	12.9	7.0	1.0
85°	34.9	15.9	12.9	13.9	11.0	3.0	7.0	9.0	7.0	4.0	0.0
87.5°	9.0	7.0	9.0	10.0	8.0	1.0	3.0	1.0	3.0	1.0	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)