

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: P367443

Luminaire Tested: **MSA-SA2C-740-U-SL4-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367443  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-21)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2C-740-U-SL4-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10202 lumens  
Efficiency: N/A  
Efficacy: 90.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

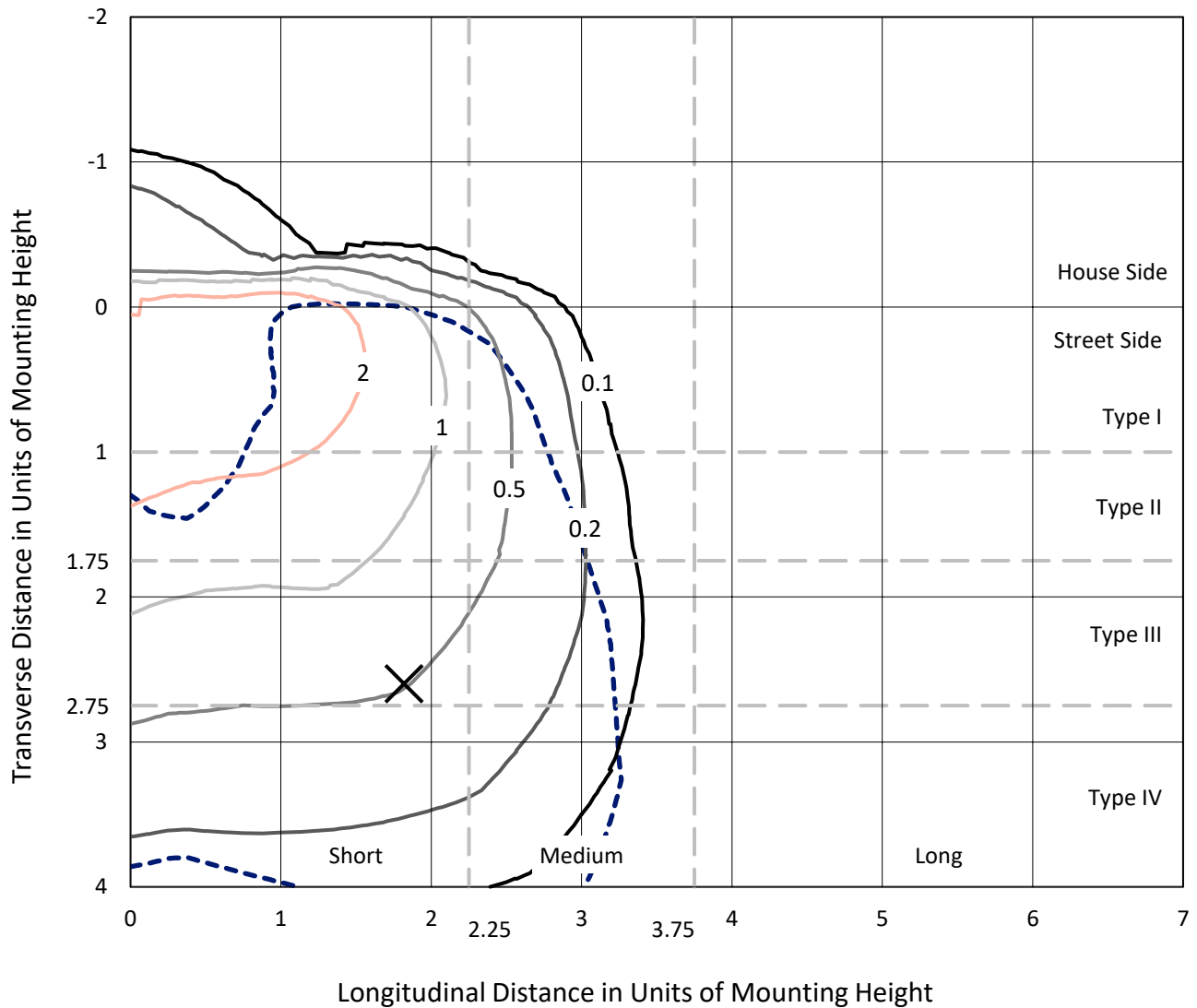
Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

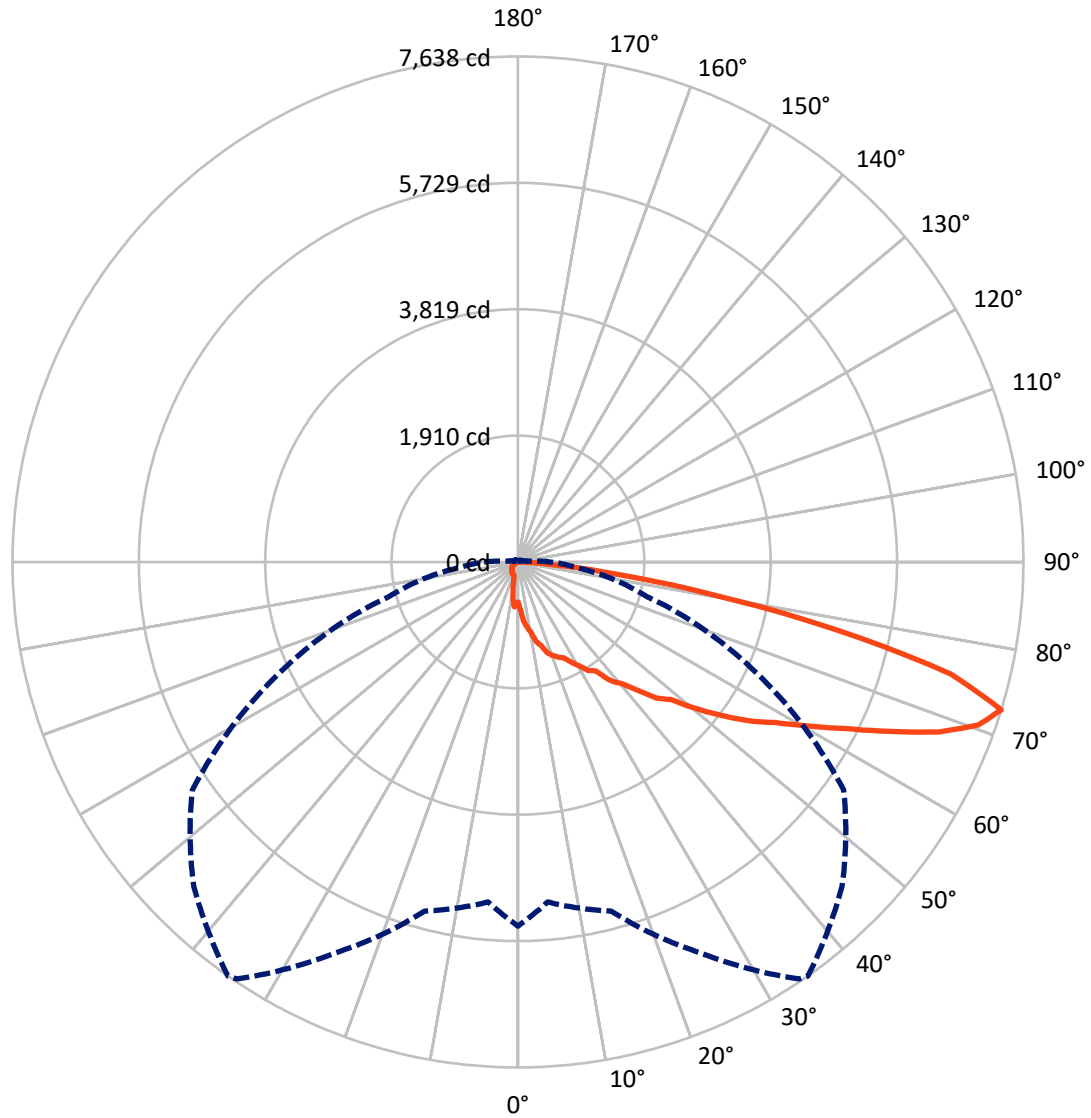
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.6 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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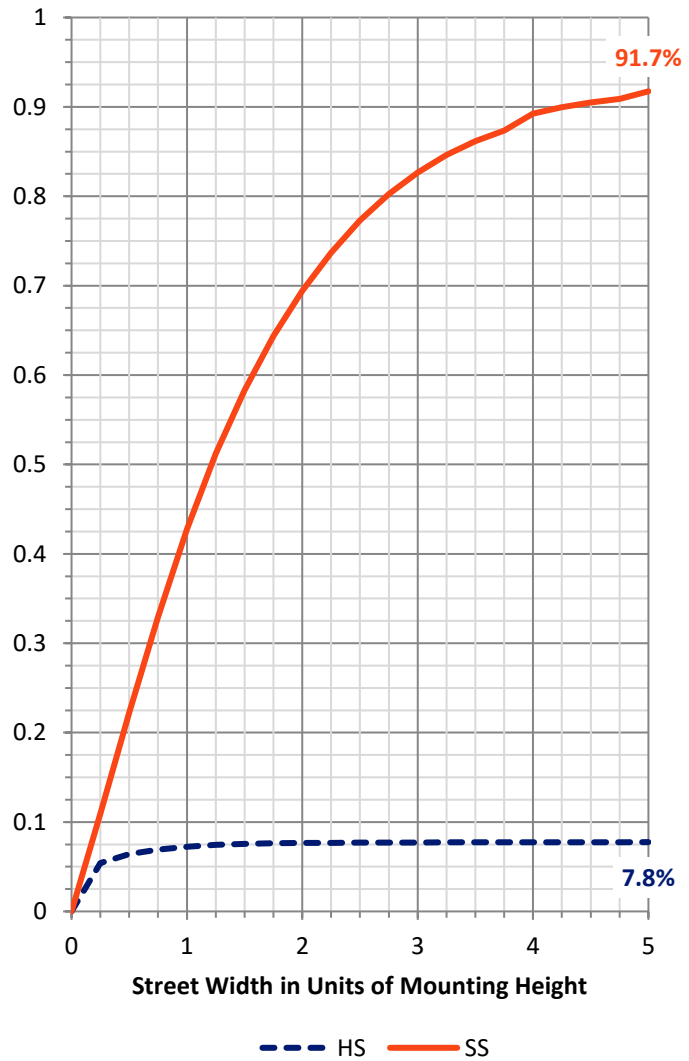
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	795.7	0.0	795.7
	% Fixture	7.8	0.0	7.8
<b>Street Side</b>	Lumens	9406.3	0.0	9406.3
	% Fixture	92.2	0.0	92.2
<b>Total</b>	Lumens	10202.0	0.0	10202.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.5	0.8
10°-20°	261.1	2.6
20°-30°	475.5	4.7
30°-40°	820.1	8.0
40°-50°	1457.9	14.3
50°-60°	2175.5	21.3
60°-70°	2779.5	27.2
70°-80°	1933.8	19.0
80°-90°	221.2	2.2
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°	10202.0	100.0
0°-180°	10202.0	100.0

**Coefficient of Utilization**

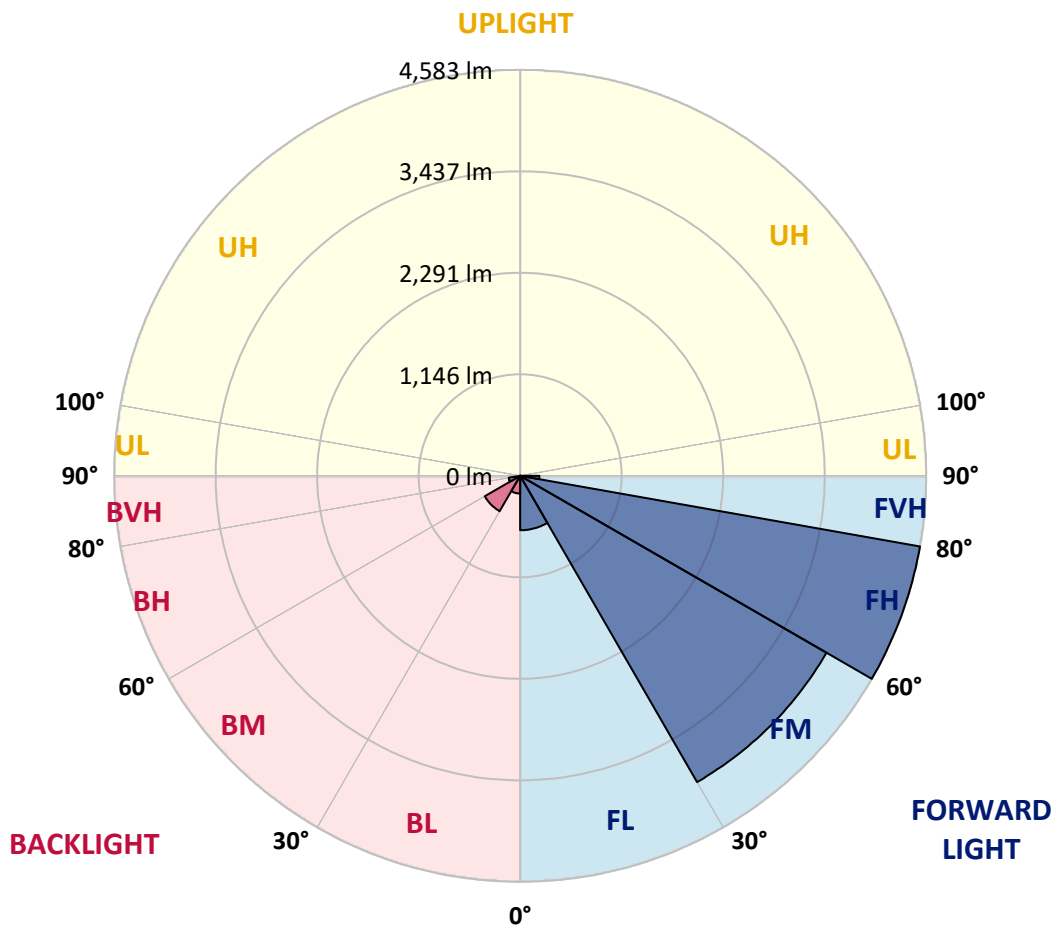


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	613.9	6.0			
FM (30°-60°)	3992.1	39.1			
FH (60°-80°)	4582.8	44.9			G2/5000
FVH (80°-90°)	217.5	2.1			G2/225
BL (0°-30°)	200.1	2.0	B1/500		
BM (30°-60°)	461.4	4.5	B1/1000		
BH (60°-80°)	130.5	1.3	B1/500		G1/500
BVH (80°-90°)	3.7	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°	34°	35°	45°	55°	65°	75°	85°
0°	607.7	607.7	607.7	607.7	607.7	607.7	607.7	607.7	607.7	607.7	607.7
2.5°	773.4	743.1	693.9	697.5	719.5	724.1	730.8	713.4	698.0	670.8	723.6
5°	990.8	947.2	919.5	910.8	898.0	899.0	867.7	879.0	876.0	896.0	920.1
7.5°	1113.4	1089.3	1054.4	1044.7	997.5	992.4	953.9	1005.7	1010.8	1003.7	1043.1
10°	1162.1	1130.3	1134.4	1098.0	1074.4	1080.6	1086.7	1090.8	1097.5	1104.2	1056.0
12.5°	1190.8	1196.5	1252.4	1214.4	1238.0	1238.0	1279.6	1235.5	1237.0	1188.8	1197.0
15°	1320.1	1351.4	1326.2	1325.7	1300.1	1306.8	1355.0	1320.1	1338.0	1323.7	1268.3
17.5°	1482.1	1488.3	1440.6	1419.6	1442.7	1443.2	1422.7	1421.1	1358.5	1464.2	1397.0
20°	1533.9	1568.8	1501.1	1419.1	1515.0	1510.4	1508.8	1484.7	1380.6	1527.3	1471.9
22.5°	1675.0	1625.2	1579.1	1525.2	1562.7	1562.7	1557.0	1504.2	1463.7	1521.6	1545.2
25°	1719.1	1725.2	1665.2	1647.8	1648.8	1602.7	1598.6	1576.0	1537.0	1636.0	1588.8
27.5°	1870.9	1868.3	1724.2	1772.9	1710.9	1711.4	1598.1	1648.8	1655.5	1641.6	1694.5
30°	2020.1	2061.7	1844.2	1905.8	1840.6	1821.1	1710.4	1755.5	1767.3	1751.4	1818.1
32.5°	2210.4	2271.4	2060.1	1999.6	1900.1	1955.5	1879.1	1772.4	1830.9	1972.9	2010.4
35°	2412.0	2441.7	2216.6	2131.9	2019.6	2019.1	2016.5	2025.3	2089.9	2249.9	2281.7
37.5°	2774.0	2703.8	2500.2	2306.3	2331.4	2275.5	2236.6	2277.6	2344.8	2608.4	2744.3
40°	2976.1	2925.3	2638.6	2523.8	2399.1	2419.6	2525.3	2520.7	2699.7	2975.6	3179.2
42.5°	3172.5	3124.3	2842.2	2749.4	2589.4	2645.3	2691.5	2749.9	3116.6	3561.8	3673.6
45°	3347.4	3205.8	3006.9	3010.5	2927.4	2934.0	3015.6	3069.4	3599.7	4056.2	4134.6
47.5°	3453.0	3336.6	3145.8	3142.3	3137.1	3105.8	3490.0	3539.2	3984.9	4527.0	4534.1
50°	3601.8	3456.1	3288.9	3292.0	3410.5	3476.6	3935.1	3930.0	4356.7	4919.8	4754.2
52.5°	3786.9	3609.0	3424.8	3561.8	3744.9	3852.6	4224.9	4376.7	4756.2	5166.5	4840.3
55°	4023.9	3801.3	3623.8	3799.2	4198.7	4240.3	4508.5	4829.0	5191.6	5418.3	4868.0
57.5°	4301.8	4036.2	3892.6	4175.1	4573.6	4574.7	4921.3	5311.1	5458.8	5520.9	4836.7
60°	4601.3	4291.6	4146.9	4401.3	4987.0	5029.0	5380.3	5577.3	5730.1	5572.7	4780.8
62.5°	4864.9	4522.9	4410.5	4709.5	5440.4	5539.8	5780.4	5752.2	5926.0	5637.8	4638.8
65°	5178.8	4822.4	4748.5	5190.1	6032.2	6169.1	6229.6	6062.4	5991.7	5587.5	4269.0
67.5°	5489.6	5156.2	5154.2	5722.9	6808.1	6855.3	6791.7	6499.9	5915.3	5144.4	3591.5
70°	5708.6	5350.6	5485.5	6306.6	7513.3	7381.0	7113.3	6706.6	5363.4	3942.8	2346.3
72.5°	5502.9	5157.8	5461.9	6514.3	7600.5	7638.4	6927.1	6007.6	3984.9	2016.5	849.3
75°	4181.8	3970.5	4742.4	5779.3	6748.1	6756.8	5781.9	4237.2	1962.2	547.7	234.9
77.5°	2106.3	2039.1	3001.7	4102.8	4923.4	4909.0	3972.6	2269.9	631.3	182.1	118.5
80°	1066.2	1012.4	1277.5	2213.5	2923.8	2945.3	2268.4	1016.5	318.5	99.0	82.1
82.5°	654.9	621.6	699.0	1001.6	1419.1	1453.4	860.6	643.6	197.4	58.5	74.9
85°	126.7	133.3	401.6	501.6	566.7	553.4	254.9	529.8	59.5	34.9	54.4
87.5°	0.0	2.1	92.8	163.6	164.1	145.7	58.0	117.4	8.2	9.7	6.7
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°	607.7	607.7	607.7	607.7	607.7	607.7	607.7	607.7	607.7	607.7	607.7
2.5°	732.4	724.7	660.6	653.4	654.9	644.1	640.6	618.0	612.3	647.2	653.4
5°	909.8	858.5	799.0	777.5	744.2	687.7	679.5	665.2	649.3	655.4	650.8
7.5°	1018.5	950.3	886.7	773.4	679.5	597.5	584.1	559.5	534.9	535.4	551.3
10°	1036.0	978.5	890.8	752.9	645.7	543.1	453.9	389.3	360.0	333.9	341.6
12.5°	1137.0	1083.7	922.1	746.7	596.4	436.4	319.5	256.4	228.7	219.5	218.5
15°	1218.0	1176.0	975.4	727.7	487.2	307.2	228.7	210.3	205.1	213.9	211.3
17.5°	1338.5	1262.6	969.8	649.3	371.3	233.3	210.8	208.2	214.4	219.5	221.0
20°	1391.4	1282.1	931.3	526.2	278.0	213.9	205.7	200.5	211.8	227.2	224.1
22.5°	1444.7	1315.5	886.2	430.8	223.6	204.6	200.0	195.9	204.6	219.5	223.1
25°	1468.8	1368.8	836.0	336.4	207.7	193.9	190.8	192.3	199.5	212.8	211.3
27.5°	1590.4	1375.0	740.0	265.7	201.0	186.2	186.2	189.8	189.8	207.7	206.2
30°	1666.3	1479.1	662.1	223.6	193.3	175.4	181.6	183.1	180.5	200.0	201.6
32.5°	1799.6	1507.8	586.2	205.1	181.0	173.9	172.8	173.9	175.9	194.9	195.4
35°	2004.7	1649.3	482.6	198.0	174.9	166.2	159.0	164.6	169.8	183.6	186.2
37.5°	2405.8	1794.5	393.4	192.3	171.8	159.0	156.4	155.4	164.6	180.5	185.7
40°	2730.4	2051.4	320.0	187.7	165.7	154.9	148.2	148.7	156.9	168.7	176.4
42.5°	3190.0	2237.1	271.3	180.5	156.9	146.2	138.5	143.1	146.7	159.0	164.1
45°	3573.6	2381.2	239.0	175.9	148.2	138.0	131.8	136.9	133.3	139.5	146.7
47.5°	3878.7	2506.8	214.9	164.6	142.6	133.3	125.6	124.1	118.0	119.5	126.2
50°	4046.4	2485.8	194.9	153.3	135.4	128.7	118.0	107.2	99.0	98.5	102.6
52.5°	4105.9	2373.5	178.5	143.6	126.7	118.5	106.2	91.3	83.1	80.5	84.1
55°	4122.3	2211.9	163.6	132.8	118.5	105.6	92.8	76.9	68.2	64.1	67.7
57.5°	4069.0	1963.2	149.2	122.6	108.7	93.3	79.5	63.1	54.9	49.7	52.8
60°	3937.2	1647.3	136.4	109.8	98.5	82.6	67.2	50.8	42.1	37.4	39.0
62.5°	3645.4	1291.4	122.6	98.0	87.7	72.3	56.4	40.0	31.8	27.7	28.2
65°	3201.2	962.6	106.7	86.7	78.0	62.6	45.1	30.8	24.1	20.5	20.0
67.5°	2550.4	652.4	90.8	74.9	69.2	52.8	35.9	24.1	19.0	16.4	15.4
70°	1499.1	328.7	75.4	64.6	59.5	44.1	28.2	19.5	17.4	15.4	14.4
72.5°	494.4	142.1	59.0	53.3	49.2	35.4	22.1	17.9	16.9	14.9	13.8
75°	172.3	82.1	43.6	41.0	39.0	26.7	18.5	16.4	16.4	14.4	12.8
77.5°	112.8	63.6	32.3	29.7	29.2	19.5	15.9	15.4	14.4	11.8	9.7
80°	93.9	35.9	22.6	21.0	20.5	12.3	12.8	11.3	8.7	5.1	2.1
82.5°	86.7	21.5	11.8	12.8	11.8	4.6	7.2	6.2	4.6	2.1	0.0
85°	50.8	9.7	6.7	6.7	5.1	1.0	3.6	3.6	2.1	0.5	0.0
87.5°	5.6	4.6	3.6	3.6	2.6	0.0	1.5	1.0	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)